

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF OKLAHOMA

STATE OF OKLAHOMA, ex rel.)
W.A. DREW EDMONDSON, in his)
capacity as ATTORNEY GENERAL)
OF THE STATE OF OKLAHOMA,)
et al.)
)
Plaintiffs,)
vs.) CASE NO. 05-329-GKF-PJC
)
TYSON FOODS, INC., et al.,)
)
)
Defendants.)

TRANSCRIPT OF NONJURY TRIAL PROCEEDINGS
JANUARY 12, 2010
BEFORE GREGORY K. FRIZZELL, U.S. DISTRICT JUDGE
VOLUME 92, A.M. SESSION

APPEARANCES:

For the Plaintiffs: MR. W.A. DREW EDMONDSON
Attorney General
MS. KELLY FOSTER
Assistant Attorney General
State of Oklahoma
313 N.E. 21st St.
Oklahoma City, OK 73105

1 (APPEARANCES CONTINUED) MR. M. DAVID RIGGS
2 MR. DAVID P. PAGE
3 MR. RICHARD T. GARREN
4 Riggs Abney Neal Turpen
5 Orbison & Lewis
6 502 W. 6th Street
7 Tulsa, OK 74119
8
9
10 MR. ROBERT A. NANCE
11 MS. SHARON GENTRY
12 Riggs Abney Neal Turpen
13 Orbison & Lewis
14 5801 Broadway
15 Extension 101
16 Oklahoma City, OK 73118
17
18 MR. LOUIS W. BULLOCK
19 MR. ROBERT BLAKEMORE
20 Bullock Bullock &
21 Blakemore
22 110 W. 7th, Ste 770
23 Tulsa, OK 74119
24
25 MR. FREDERICK C. BAKER
MS. ELIZABETH CLAIRE XIDIS
MS. INGRID MOLL
Motley Rice LLC
28 Bridgeside
P.O. Box 1792
Mount Pleasant, SC 29465

18 For Tyson Foods: MR. ROBERT W. GEORGE
19 Tyson Foods, Inc.
20 2210 West Oaklawn Drive
Springdale, AR 72701

21 MR. JAY THOMAS JORGENSEN
22 MR. THOMAS GREEN
23 MR. MARK HOPSON
24 MR. GORDON D. TODD
Sidley Austin LLP
1501 K St. NW
Washington, DC 20005

1 (APPEARANCES CONTINUED)

2 For Cargill: MR. JOHN H. TUCKER
3 MS. THERESA HILL
4 Rhodes Hieronymus Jones
5 Tucker & Gable
6 100 W. 5th St., Ste 400
7 Tulsa, OK 74103

8 MR. DELMAR R. EHRICH
9 MS. KRISANN KLEIBACKER LEE
10 MR. BRUCE JONES
11 Faerge & Benson
12 90 S. 7th St., Ste 2200
13 Minnaeapolis, MN 54402

14 For Simmons Foods: MR. JOHN R. ELROD
15 MS. VICKI BRONSON
16 Conner & Winters
17 211 E. Dickson St.
18 Fayetteville, AR 72701

19 For Peterson Farms: MR. A. SCOTT MCDANIEL
20 MR. PHILIP HIXON
21 MS. NICOLE LONGWELL
22 MR. CRAIG MIRKES
23 McDaniel Hixon Longwell &
24 Acord PLLC
25 320 S. Boston, Ste 700
Tulsa, OK 74103

For George's: MR. WOODY BASSETT
MR. VINCENT O. CHADICK
MR. JAMES GRAVES
MS. K.C. TUCKER
MR. GARY WEEKS
Bassett Law Firm
P.O. Box 3618
Fayetteville, AR 72702

For Cal-Maine: MR. ROBERT SANDERS
Young Williams P.A.
P.O. Box 23059
Jackson, MS 39225

MR. ROBERT P. REDEMANN
Perrine McGivern Redemann
Reid Berry & Taylor PLLC
P.O. Box 1710
Tulsa, OK 74101

Terri Beeler, RMR, FCRR

United States Court Reporter
333 W. 4th St.

Tulsa, OK 74103 * 918-699-4877

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THE COURT: When is this matter being argued before the Tenth Circuit? It's this week, is it not?

MR. BULLOCK: The Cherokees still have to file their reply brief, and argument hasn't been set.

MR. BULLOCK: No.

MR. BULLOCK: We're probably going to be late and incur some anger if, in fact, you're right.

THE COURT: Very well. Thank you.

Terri Beeler, RMR, FCRR
United States Court Reporter
333 W. 4th St.
Tulsa, OK 74103 * 918-699-4877

CONTINUED DIRECT EXAMINATION

BY MR. GEORGE:

Q. Doctor, could you take your notebook and turn to tab 11, the aerial photograph of the Watts lagoons.

A. Yes.

Q. Is it true, Doctor, that you mentioned to me this morning that you think you may have misspoke in an exchange we had about this particular exhibit?

A. That's correct.

Q. I want to clear up the record here, if we can. Doctor, this particular photograph that has been introduced as Defendants' Joint Exhibit 1454, I believe at one point yesterday you said you thought this was in your report, this photograph?

A. Correct.

Q. Was this particular photograph in your report?

A. No.

Q. You did evaluate aerial photography of this location; is that right?

A. Yes, I did, and it was in my considered materials.

Q. Just that this one photo was not an actual exhibit in your report, correct?

A. That's correct.

1 Q. Thank you. Doctor, we talked a little bit
2 yesterday about overland flow, and I want to kind of
3 pick up there, if we can.

4 Are there some substances that are more
5 susceptible to various types of overland flow than
6 others?

7 A. I think the way I would phrase it is not so
8 much susceptibility to overland flow as an issue
9 whereby the flow paths followed by the water will
10 have different likelihoods of carrying substances.

11 In particular, the flow paths that have a
12 lot of contact with the soil, the deep flow paths
13 that -- the interflow through the shallow soils lose
14 a lot of opportunity for interaction between the
15 water and the soils.

16 In those flow paths, substances that are
17 what we call conservative, like nitrate, for
18 example, or chloride, they tend to not adsorb to
19 soil particles, and they move right with the water.
20 But substances like phosphorus tend to adsorb to
21 soils and not move with that water when it has a lot
22 of contact with soil.

23 But for the overland flow where there's
24 less contact with soil, there's more opportunity to
25 transport the phosphorus. But in that overland

1 flow, you also can transport the conservative
2 substances as well.

3 Q. Doctor, what factors on a field, say a pasture,
4 control the propensity of phosphorus to move off a
5 field in overland flow?

6 A. Well, the main controlling factor is whether,
7 in fact, you have overland flow. That is, by far,
8 the most important consideration. There will be
9 some pasture areas that may have it, and there will
10 be many pasture areas that will not.

11 And whether or not you have overland flow
12 is determined by, in particular, the soil
13 characteristics, the infiltration rate, the
14 distribution of sediment sizes, soil texture, and
15 the steepness of the slope. So those are all
16 involved in determining if you have overland flow.

17 Then plus the hydrology we talked about
18 yesterday is the groundwater coming up during storms
19 in certain locations to the point where it saturates
20 the soil.

21 Q. Doctor, I've already been handed a note that
22 you and I both need to slow down again, so I'm
23 reminding myself. Now I'll remind you.

24 MR. GEORGE: Sorry, Your Honor.

25 THE WITNESS: Thank you.

1 Q. (By Mr. George) Doctor, are you familiar with
2 the term "critical source area"?

3 A. Yes.

4 Q. And what does that mean with regard to the
5 movement of nutrients?

6 A. A critical source area is an area where you
7 have an overlap of source and opportunity for
8 transport. So with respect to phosphorus, in order
9 for phosphorus to move in any appreciable quantity
10 to a stream, you need to have a quantity of
11 phosphorus at that particular site, and the
12 transport has to be able to move that phosphorus
13 from that site to the stream. And that's what we
14 discussed; that largely is the overland flow
15 process. So when those two overlap, that's the
16 critical source area.

17 If you've got the supply but no transport,
18 there's not a major risk to movement into the
19 stream. If you've got the transport and not the
20 source, similarly, there's not a major risk of
21 movement. It's where the two overlap.

22 Q. Doctor, in light of that, in order to
23 understand the potential for phosphorus to run off
24 of a particular field, is it sufficient to look only
25 at soil test phosphorus?

1 A. No. Soil test phosphorus is one way to get a
2 handle on the source, but it tells you nothing about
3 the transport. You have to look at the two together
4 to identify where those critical source areas are.
5 They are also called hotspots by a lot of
6 scientists.

7 Q. Doctor, let's talk about some of the factors
8 that may influence the transport potential of the
9 critical source discussion that we've been having.

10 To what extent does the water flow path
11 impact the transport potential?

12 A. That's the most important determination is the
13 flow path.

14 Q. As we were discussing yesterday, we defined
15 some terms including "overland flow" and different
16 types of overland flow. One thing I think we missed
17 and I want to cover now is runoff. You're aware the
18 term "runoff" has been used throughout this trial?

19 A. Yes.

20 Q. And do you have a working definition of
21 "runoff," and can you explain how it may be
22 different from overland flow?

23 A. Okay. There are a couple of issues here. One
24 is, is that the term "runoff" is used in different
25 ways. It's my belief that those differences can

1 introduce a lot of confusion. And in reviewing the
2 testimonies in this trial, that was apparent to me
3 that people were using the term in different ways.

4 Runoff is a hydrological term, and what it
5 means is during storms, water that moves into the
6 stream, that's runoff. And so you can quantify
7 runoff as the total amount of stream flow. And that
8 gives you an indication of all the water that -- for
9 example, we can talk about the runoff to Lake
10 Tenkiller. What's the total amount of stream water
11 during a storm, storm runoff that gets to Lake
12 Tenkiller. But for -- the water gets there from
13 rainfall, but it follows different pathways to get
14 there.

15 And we talked about the overland flow. We
16 talked about the interflow and the deep flow, these
17 different pathways. And with a substance like
18 phosphorus, the pathway followed has a very
19 important influence on the transport of that
20 phosphorus.

21 But in terms of breaking runoff down so we
22 can say, well, we've got the overland flow part and
23 we talked about two different types of overland
24 flow, but the end result is the same. We've got
25 interflow, which is shallow and lateral, then the

1 deep flow.

2 Some people, when they use the term
3 "runoff," they're talking -- I believe they're
4 talking about the overland flow component by
5 itself. And that's really an incorrect way to
6 evaluate that.

7 Also sometimes when people use the term
8 "runoff," what they mean is movement of phosphorus
9 or some other constituent into a stream. And I
10 recognize that people commonly use the term that
11 way, but in the scientific evaluation like this, I
12 think we have to be more precise about the words
13 that we use. And "runoff" is really a hydrological
14 term. It's talking about movement of water, not
15 moving of phosphorus. I think we need to be careful
16 to keep those distinctions in mind.

17 Q. Doctor, are all pastures and all areas of all
18 pastures created equal in terms of their propensity
19 to generate overland flow?

20 A. No.

21 Q. Does it require a site-specific evaluation?

22 A. Yes, very much so.

23 Q. Doctor, if phosphorus moves off of a field,
24 does it necessarily reach flowing waters?

25 A. No.

1 Q. Why not?

2 A. Well, if the water moves off the field -- like,
3 for example, on a field, you can have areas that
4 generate overland flow. And then as you move
5 further down the field, you may get to an area where
6 it no longer generates overland flow in that
7 particular storm size and the water infiltrates down
8 into the soil there. So you may have a hill slope,
9 you have some overland flow at the top, and it
10 percolates and infiltrates down into the soil where
11 it's no longer overland flow.

12 So somewhere in that hill slope, it had the
13 chance to interact with soil, thereby removing much
14 or all of that phosphorus that was in the overland
15 flow originally. So that's one issue.

16 But another issue is that the fields are
17 located at variable distances from streams.
18 Sometimes there's a stream right in the field or
19 right below the field. Other times, the nearest
20 stream might be a mile away or more. So you can
21 have overland flow in different places that
22 eventually infiltrates and never gets to a stream
23 without that soil contact.

24 You can also have overland flow go into a
25 ditch line, but that ditch line can have multiple

1 fates. It may flow into a stream, it may not. It
2 may -- it may be dug all the way to a stream, but
3 before the water gets there, it infiltrates down
4 into the soil in the bottom of the ditch.

5 There's all different types of situations
6 in terms of whether or not that water will
7 eventually reach a stream.

8 Q. Doctor, you've reviewed the testimony of
9 Dr. Engel in this courtroom, have you not?

10 A. Yes, I have.

11 Q. And you saw that Dr. Engel testified that once
12 phosphorus begins to move off of a field, it will
13 necessarily continue in motion until it reaches the
14 reservoir at the bottom of the watershed? Did you
15 see that?

16 A. Yes, I've seen that.

17 Q. Do you agree with that assumption?

18 A. No. There's no basis for that claim at all, in
19 my view.

20 Q. Doctor, as part of your work in this case, did
21 you review any regulations or restrictions placed on
22 the use of poultry litter as a fertilizer or soil
23 conditioner in the watershed?

24 A. Yes, I did.

25 Q. Specifically, what type of regulations or

1 restrictions did you look at?

2 A. In terms of the on-the-ground restrictions?

3 Q. Yes, sir.

4 A. Setbacks for litter application from streams,
5 instructions to not spread on areas that flood, to
6 not spread on frozen soils, to not spread on steep
7 terrain, to not spread on shallow soils. So there
8 are a number of rules that are in place that govern
9 the application of litter.

10 Q. Doctor, did you review the restrictions such as
11 those you've just described in Code 590?

12 A. Yes.

13 Q. Did you review Animal Waste Management Plans or
14 Nutrient Management Plans as well?

15 A. Nutrient Management Plans, yes.

16 Q. Doctor, are you a legal expert in the rules and
17 regulations governing litter application?

18 A. No.

19 Q. Was it necessary for you to be a legal expert
20 on the rules and regulations to perform your work in
21 this case?

22 A. No.

23 Q. How were the rules and the restrictions and the
24 plans that you've just described important to your
25 work in this case as a scientist?

1 A. Well, as a scientist, what was important is for
2 me to see if the rules and regulations made sense
3 relative to the state of the scientific
4 understanding on phosphorus movement. And the
5 scientific understanding on phosphorus movement has
6 to do with these critical source areas or hotspots
7 and the reasons for those and the different flow
8 paths followed by the water.

9 So what was important to me was to see if
10 those kinds of considerations were appropriately
11 incorporated into the regulations. And it's my view
12 that they are.

13 Q. Based upon your review of Animal Waste
14 Management Plans or Nutrient Management Plans and
15 the rules and regulations that we've talked about,
16 do the systems in place from a regulatory standpoint
17 in this watershed account for some of the hydrologic
18 factors that have an effect on the generation of
19 overland flow?

20 A. Yes, they do.

21 Q. Did you note any restrictions on the
22 application of litter to frozen or saturated soils?

23 A. Yes.

24 Q. Is that important in your analysis?

25 A. Yes. If the soils are frozen, then that

1 provides an enhanced opportunity for overland flow,
2 if it rains on frozen soils.

3 Q. Did you note any restrictions on litter
4 application on areas with steep slopes?

5 A. Yes.

6 Q. And how was that important to your analysis?

7 A. Well, one of the issues that helps regulate the
8 risk of overland flow is the steepness of the
9 slope. And in general, all things being equal, if
10 the slope is steeper, there's a higher risk.

11 Q. Doctor, I believe you mentioned that one of the
12 things you noted was some setback requirements from
13 streams; is that right?

14 A. Yes.

15 Q. How was that important to your analysis?

16 A. Well, the hydrologically active areas, the
17 areas that are likely to generate overland flow in a
18 sufficiently large storm, you can find them
19 anywhere, but they tend to be most commonly found
20 close to the streams.

21 And the major reason for that is because
22 the groundwater movement is moving from the hill
23 slope down towards the stream, and so you have a
24 higher likelihood that you will get the type of
25 overland flow that results when the groundwater

1 comes up right to the surface, and then when it
2 rains, there's no place for the water to go except
3 sideways as overland flow.

4 And that's our saturated -- our saturation
5 excess overland flow. So that type is far more
6 likely to occur in proximity to the stream in those
7 riparian areas.

8 Q. Doctor, did you note any restrictions in your
9 review on the application of litter to shallow
10 soils?

11 A. Yes.

12 Q. And was that important to your analysis?

13 A. That really was not important to the analysis
14 that I conducted, because I was focused on the
15 potential for impacts on the streams and the soil
16 issues. I think it's important that that regulation
17 be there as a way of protecting the groundwater
18 resources.

19 Q. Now, Doctor, based upon the Nutrient Management
20 Plans you reviewed, including those from the state
21 of Arkansas, in your judgment, do those plans take
22 into consideration both source and transport
23 considerations?

24 A. Yes.

25 Q. Okay. All right, Doctor. Let's move to your

1 review of some of the specific work of experts for
2 the State of Oklahoma in this case.

3 As part of your work in this case, did you
4 review the reports and work of various State
5 experts?

6 A. Yes, I did.

7 Q. Let me ask you about some of the specific lines
8 of evidence that have been put forward by the State
9 to support its claims of impact upon streams and
10 rivers from poultry litter. You reviewed the
11 State's edge-of-field sampling program?

12 A. Yes, I have.

13 Q. And in your judgment, how important are these
14 edge-of-field samples to the State's causation case?

15 A. I think they're critical to the State's
16 causation case because the edge of field is really
17 the type of data that the State uses in a number of
18 these expert reports and analyses to try to
19 establish a connection between what's on the field
20 and what's in the stream.

21 Q. Doctor, I believe you testified yesterday, but
22 I want to make clear, you have actual field
23 experience in gathering and using edge-of-field
24 samples, correct?

25 A. Yes, I do.

1 Q. Based upon your review, are the edge-of-field
2 samples collected by the State in this case
3 representative of what runs off of a litter-amended
4 field?

5 A. No.

6 Q. Why not?

7 A. The edge-of-field samples were collected
8 largely from ditches. There was no permission
9 granted to go onto the landowner's land and set up
10 an apparatus with which to collect flow coming off
11 of pastureland. And by and large, those samples
12 were not collected from flowing water; they were
13 collected from a ditch that was convenient to the
14 road where the samplers could get without having
15 permission to get onto the land.

16 So there's no way to know where that water
17 came from. Perhaps some of it came off a field. We
18 don't know. It may have come from something upslope
19 associated with that ditch. And if it did come off
20 the field, we don't know what the source of
21 phosphorus on the field was that may have
22 contributed the phosphorus to the edge-of-field
23 water.

24 Q. Doctor, you mentioned that some samples were
25 collected from ditches. Did you note in your review

1 any samples that were collected from puddles?

2 A. Yes.

3 Q. Are those sort of edge-of-field samples
4 representative of what flows off of a litter-amended
5 field?

6 A. There's no way to know where the water came
7 from. It could have come from one place or from
8 many different places. And what that place was,
9 there's no information to really tell us that.

10 Q. Now, Doctor, in addition to reviewing the
11 photographs, did you look at the field notes from
12 the team that actually collected the samples?

13 A. Yes, I did.

14 Q. And in terms of documentation of flow, what did
15 you see in those field notes?

16 A. I didn't really see documentation of flow. In
17 terms of documentation of flow, there were, you
18 know, a few instances and testimony that I saw, a
19 few cases that they may have been flowing water, but
20 by and large, that was not the case.

21 Q. Is that important to your analysis?

22 A. Well, it is, because -- for two reasons.
23 Number one is trying to figure out where that water
24 came from. We don't know where it came from. I'm
25 not sure what value it is in this kind of

1 investigation.

2 But then beyond that, even if we knew where
3 it came from, we don't know whether it was flowing
4 somewhere else or it just stayed in that puddle or
5 that ditch and eventually infiltrated into the soil.

6 Q. Doctor, did you also review Dr. Engel's and
7 Dr. Stevenson's poultry house density correlation
8 analysis?

9 A. Yes, I did.

10 Q. What did you understand to have been the
11 purpose of that analysis?

12 A. The purpose of that analysis was to evaluate
13 the relationship between poultry house density, as
14 they estimated it, and the phosphorus concentration
15 in the stream and perhaps other parameters as well.
16 But the main focus was phosphorus.

17 Q. Do you agree that the correlations they
18 calculated between poultry house density and
19 phosphorus concentration show that poultry litter
20 application is responsible for elevated phosphorus
21 concentrations?

22 A. No.

23 Q. Why not?

24 A. Well, for multiple reasons. One is that a
25 correlation does not demonstrate causality. It just

1 indicates that two variables are related to each
2 other in space or in time. We can talk about that
3 in detail, if you want, but that's the first reason.

4 Q. What is a cross-correlation?

5 A. A cross-correlation is a situation whereby you
6 look at two variables and they related to each
7 other, but that relationship may be influenced or
8 mediated by a relationship with a third variable or
9 multiple other variables.

10 So if A and B are correlated, you might
11 say, well, A causes B. But perhaps C causes A -- or
12 C causes B, but A and C are related. So it
13 confounds the interpretation of what the correlation
14 means.

15 Q. Did the State's regression analysis account for
16 alternative potential causes that cross-correlate
17 with poultry house density?

18 A. Well, Dr. Engel actually did report a
19 statistically significant correlation between septic
20 systems and poultry house density. But then he
21 dismissed that for what I believe to be insufficient
22 grounds.

23 Q. Does that cross-correlation confound the
24 analysis, in your view?

25 A. Yes.

1 Q. Doctor, did you perform any analysis to examine
2 other cross-correlations between poultry house
3 density and potential sources of phosphorus?

4 A. Yes, I did.

5 Q. Can you turn in your binder to tab 21.
6 Actually, 22.

7 A. Yes.

8 Q. And find Defendants' Joint Exhibit 2257. Can
9 you identify that document for the record, please.

10 A. That's a figure from my report.

11 Q. Was this figure prepared under your direction?

12 A. Yes.

13 Q. And can you describe generally the source of
14 the data or information that is shown in this
15 exhibit?

16 A. Yes. The source of the information would be
17 Dr. Engel's materials.

18 Q. Let's do a few of these at a time. Can you
19 turn to the next tab, Doctor, and find Defendants'
20 Joint Exhibit 2258.

21 A. Yes.

22 Q. And can you identify the source of the data
23 that is shown.

24 A. Yes. That's also information from Dr. Engel's
25 considered materials presented as a figure in my

1 report.

2 Q. Was this exhibit prepared under your direction?

3 A. Yes.

4 Q. And then the last tab, tab 24, Doctor, could
5 you find Defendants' Joint Exhibit 2259.

6 A. Yes.

7 Q. And could you identify generally the source of
8 the information and data that's shown in this
9 figure.

10 A. This was from -- data from USDA Census of
11 Agriculture.

12 Q. Is Dr. Engel's poultry house density data also
13 shown?

14 A. Yes, it is -- oh -- yes, that's right. Well,
15 that was not restricted to Dr. Engel's poultry house
16 density necessarily; it was the plaintiff's poultry
17 house density data layer.

18 Q. I'm sorry. Thank you. Was this figure also
19 prepared under your direction?

20 A. Yes, it was.

21 MR. GEORGE: Your Honor, I'd move for
22 introduction of Defendants' Joint Exhibits 2257,
23 2258, and 2259.

24 THE COURT: Any objections?

25 MR. BULLOCK: I have no objection to 2257

1 and 2258. I do object to 2259, as the caption on
2 that states this is based upon the calculations of
3 Billy Clay, and Billy Clay is not before the court
4 and hasn't presented these matters before this
5 court.

6 MR. GEORGE: Your Honor, perhaps we could,
7 without objection, have the first two exhibits
8 introduced, and then I'll move to lay a further
9 foundation.

10 THE COURT: Very well. 2257 and 2258 are
11 admitted.

12 Q. (By Mr. George) Doctor, let's talk about the
13 first two, then we'll come back to the third
14 exhibit.

15 Can you look at Exhibit 2257 and explain
16 what is shown there and how it is relevant to your
17 analysis of cross-correlations.

18 A. What's shown is the density of poultry houses.
19 And there are two poultry house densities that are
20 used based on Doctor Engel's characterization as all
21 poultry houses on the top figure, and just the
22 active -- what he identified as what he believed to
23 be active houses on the bottom figure.

24 Then on the X axis, or the horizontal axis,
25 we have the septic density. And these are based on

1 the subwatersheds that were studied by Dr. Engel. I
2 believe there were 14 of them. And he had deleted
3 from consideration in calculating his regression
4 statistics a couple of subwatersheds because they
5 had urban influences in those watersheds.

6 Q. Do you agree that that was appropriate to
7 delete those subwatersheds?

8 A. Yes, I do. I think it's appropriate to zero in
9 on the influence of land that's separate from the
10 urban influence, but I do think it's really
11 important when you do that to make sure you
12 communicate that caveat, that the results of the
13 analyses are purposely excluding whatever impact you
14 may have in the urban environment. I think it's
15 appropriate to do that. I would do it the same way,
16 but I think that if you fail to communicate that
17 caveat, that's misleading.

18 Q. Doctor, were there any other subwatersheds
19 that, in your judgment, were impacted by urban land
20 uses that should have been deleted from the
21 analysis?

22 A. Yes. There was one other that had -- I think
23 it was seven percent of land use. It was more than
24 five percent. So I thought that for the same
25 reasons as Doctor Engel had deleted the other two,

1 that the third one should be deleted as well.

2 Now, I didn't delete them from the
3 figures. I showed the data, but I didn't include
4 them in calculating the regression line.

5 Q. Can you continue to show what -- to describe
6 what your analysis shows.

7 A. What it shows is a statistically significant
8 relationship between the density of septic systems
9 in these small subwatersheds and the poultry house
10 densities that Dr. Engel estimated for these same
11 small subwatersheds.

12 Q. I'm a lawyer primarily because I'm not good at
13 statistics. Can you tell us what it is about this
14 figure that defines statistical significance.

15 A. It's the P value. And it's -- both of those
16 plots were P less than 0.01. The main -- the main
17 standard that's used for evaluating significance on
18 regressions like this would be if the P value was
19 less than .05. That's what's called the 95 percent
20 significance level. That's what people typically
21 use. So a P of less than .01 is of higher
22 significance than that.

23 Q. Doctor, based upon the analysis shown in this
24 exhibit, are the presence of septic tanks in rural
25 areas where poultry houses are located a confounder

1 in the analysis?

2 A. Yes, because if you're going to try to use a
3 regression between stream phosphorus and poultry
4 house density and say from the results of that that
5 the poultry houses are causing the stream
6 phosphorus, well, first of all, you can't say that
7 the significance of the correlation means that those
8 are causal anyway; but independent of that, the fact
9 that something else that's a possible source is also
10 correlated is certainly a confounding factor.

11 Q. Doctor, could you turn to the next tab,
12 Defendants' Joint Exhibit 2258 which is in
13 evidence. And could you describe the analysis that
14 is shown in this figure and how it's relevant to
15 cross-correlation.

16 A. Yes. This is essentially the same analysis as
17 the previous figure, except that on the X axis,
18 we're looking at the density of roads in those
19 subwatersheds rather than the density of septic
20 systems. But again, we see the correlation between
21 poultry house density and, in this case, road
22 density.

23 Q. Doctor, does the presence of roads in areas
24 where poultry houses are located constitute a
25 confounder in the analysis?

1 A. Yes, for the same reason as we discussed with
2 septic systems.

3 Q. Doctor, I note there's one other statistic on
4 these figures that we haven't discussed yet, which
5 is the R^2 value. Do you see that?

6 A. Yes.

7 Q. That's present on both of the exhibits that
8 we've been discussing?

9 A. Yes.

10 Q. What is the R^2 value, and what does it tell us?

11 A. It tells us what percent of the variation
12 between the two variables is explained by the
13 relationship by the regression. So we're on this
14 Figure 8-6, and if we look at the top, the top
15 panel, it gives an R^2 of 0.57. That means that 57
16 percent of the variability in the poultry house
17 density can be explained by its relationship with
18 road density.

19 Q. Thank you. Now, Doctor, did you also evaluate
20 -- let me back up.

21 Based upon your review of cattle
22 populations in the watershed and your own personal
23 observations in the watershed, are cattle generally
24 associated with the rural areas in which poultry
25 houses are situated?

1 A. That's been my observation, yes.

2 Q. Doctor, as part of your review of the work of
3 Dr. Stevenson and Dr. Engel, did you investigate the
4 statistical correlation between where cattle are
5 located and where poultry houses are located in the
6 watershed?

7 A. Yes, I did.

8 Q. And as part of that analysis, were you provided
9 with data from Dr. Clay regarding cattle locations?

10 A. Yes.

11 Q. Doctor, is the -- if you could turn to tab 24
12 and find Defendants' Joint Exhibit 2259.

13 A. Yes.

14 Q. With respect to the information provided by
15 Dr. Clay, can you provide us with a description of
16 that information and how it was assembled for your
17 use.

18 A. Well, the information would be the cattle
19 densities from the census of agriculture. And
20 Dr. Clay aggregated those by ZIP code because that
21 was a way to give us a number of spatial units
22 within the overall IRW that we could use to evaluate
23 relationships between cattle and some other
24 variable. We did not have cattle estimates by Engel
25 subwatersheds.

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1 So then the next step would be, well, what
2 other units of geography can we use to evaluate the
3 spatial relationship. And the best that we could
4 come up with to do that was the cattle by ZIP codes.

5 Q. Doctor, when you looked across the watershed at
6 poultry house density and cattle by ZIP code, did
7 you find the statistical relationship?

8 A. Yes.

9 MR. GEORGE: Your Honor, I move for the
10 introduction of Defendants' Joint Exhibit 2259.

11 MR. BULLOCK: Judge, even by his own
12 testimony today, it remains hearsay as to the cattle
13 density. I don't believe that he can testify as to
14 cattle densities.

15 MR. GEORGE: Your Honor, under Rule 703, an
16 expert is entitled to rely upon hearsay for purposes
17 of his analysis. We're not offering the underlying
18 ZIP code statistics by Dr. Clay for the truth of the
19 matter. We're simply offering them as the basis for
20 an opinion and an analysis that this expert has
21 done. I think that's proper.

22 THE COURT: This is part of his report?

23 MR. GEORGE: It is, Your Honor.

24 THE COURT: Rule 703 would permit it not
25 for the truth of the matter asserted, but as being

1 of a type reasonably relied upon by experts in a
2 particular field. The Exhibit 2259 is admitted.

3 Q. (By Mr. George) Doctor, we heard testimony, and
4 I think you reviewed it, by Dr. Engel that his
5 analysis was based on 14 subwatersheds within the
6 million-acre watershed. Did you see that?

7 A. Yes.

8 Q. Did you see any analysis in Dr. Engel's work
9 that would support the extrapolation of his results
10 for the 14 subwatersheds to the watershed as a
11 whole?

12 A. No.

13 Q. Doctor, did you also analyze the manner in
14 which Dr. Engel and Dr. Stevenson counted poultry
15 houses in their correlations?

16 A. Yes.

17 Q. And what did they do generally?

18 A. Well, they had a database of poultry house
19 locations that was obtained, it's my understanding,
20 from aerial photography. And they did some analyses
21 to try to determine which ones were active and which
22 ones were not. I have no idea how valid that is,
23 but that's something they did, and I took it at face
24 value.

25 But in performing their analyses, their

1 correlations, they also assigned a two-mile buffer
2 around each of the subwatersheds. So you'd have a
3 subwatershed for study, and then expand that out two
4 miles in all directions and create a buffer.

5 And then in calculating the number for the
6 density of poultry houses, what they did was, for
7 some analyses, they just did the poultry houses in
8 the subwatersheds, and I don't have a problem with
9 that. But for other analyses, they tabulated the
10 number of poultry houses in the subwatersheds plus
11 in those two-mile buffers.

12 I can stop there and see where you want to
13 go from there.

14 Q. Doctor, what is your understanding of the
15 purpose of these two-mile buffer zones in their
16 analyses?

17 A. How it was explained was that there's a
18 possibility that poultry litter is trucked from the
19 poultry house location to the area it's going to be
20 spread, and they contend that that area is rather
21 short, and they identified two miles as what they
22 believed to be the area from which poultry litter
23 may be imported into the subwatershed.

24 But they did not account for the fact that
25 there's an equal possibility or probability that

1 poultry litter from a house inside that subwatershed
2 could be trucked the same two miles outside. So it
3 was a very biased analysis.

4 Q. Doctor, what is the impact -- and maybe you got
5 there just a moment ago. What is the impact of that
6 accounting method on the reliability of the results?

7 A. My opinion is it renders those results
8 unreliable, because it's a faulty logic constraint
9 on the analysis. If there's an equal possibility or
10 probability of trucking poultry litter in as
11 trucking poultry litter out, then if you want to
12 conclude half of that in your analysis, you need to
13 somehow include consideration of the other half as
14 well. Otherwise, you're biasing your analysis.

15 Q. Doctor, did you review the impact that these
16 buffer zones had on the actual poultry house counts
17 used in the subwatershed analysis?

18 A. Yes, I did.

19 Q. And what was that impact?

20 A. Well, the end result was that the total number
21 of poultry houses that they counted in their
22 subwatersheds plus buffers was about the same as the
23 total number of poultry houses that they estimated
24 for the entire IRW. That was because they were
25 double and triple counting poultry houses within

1 those buffers.

2 Q. Now, Doctor, did Dr. Stevenson present any
3 density regression analysis that did not use these
4 buffer zones?

5 A. I don't believe so, no.

6 Q. Doctor, based upon all the data and the reports
7 and studies and testimony that you've reviewed and
8 the work that you've done in this case, do you agree
9 with the State's proposition that poultry litter is
10 responsible for injuring water quality in the
11 Illinois River Watershed?

12 A. No, I've not seen any indication that that
13 proposition is proved at all.

14 MR. GEORGE: Thank you, Your Honor, I'll
15 pass the witness.

16 THE COURT: Cross-examination.

17 MR. BULLOCK: Judge, we asked defendants if
18 we could interrupt Dr. Sullivan. At this time, we
19 ask rather than defendants asking, so we could go
20 ahead and do Mr. Thompson's cross. He has a dental
21 appointment that he has to make, so we thought we'd
22 drill him without Novocaine before he gets the
23 treatment.

24 THE COURT: Very well.

25 MR. GEORGE: Your Honor, the defendants are

1 agreeable to that with one qualification, and
2 Mr. Bullock and I discussed this. That is,
3 notwithstanding the interruption, we will complete
4 the cross-examination and direct of this witness
5 today so he can leave town.

6 MR. BULLOCK: Yes, sir. Steve Thompson.

7 (Witness sworn.)

8 THE COURT: State your full name for the
9 record, please, sir.

10 THE WITNESS: Stephen A. Thompson.

11 THE COURT: I understand you have a dentist
12 appointment; is that correct?

13 THE WITNESS: I do.

14 THE COURT: We'll try to get you out of
15 here.

16 Mr. Nance.

17 MR. NANCE: We appreciate the accommodation
18 and appreciate the defendants' accommodation as
19 well.

20 **STEPHEN A. THOMPSON,**
21 having been first duly sworn, was called as a
22 witness and testified as follows:

23 **CROSS-EXAMINATION**

24 BY MR. NANCE:

25 Q. Mr. Thompson, are you the director of the

1 Department of Environmental Quality?

2 A. Yes.

3 Q. And are you the same Steve Thompson whose
4 deposition was played to the court just before
5 Christmas?

6 A. Yes.

7 Q. In that deposition that was played, you said
8 you believed that the TMDL process would result in
9 an unfair allocation of load reductions. Do you
10 remember that testimony?

11 A. Yes.

12 Q. Let's pursue that in a little greater detail.
13 Do you anticipate that a completed TMDL on -- in the
14 IRW in Oklahoma would result in a determination that
15 phosphorus loadings need to be reduced?

16 A. Yes.

17 Q. And why is that, sir?

18 A. Well, the waterbody is impaired for phosphorus,
19 so definitionally, you would need -- it would
20 require reductions.

21 Q. Do you anticipate that a completed TMDL for the
22 Oklahoma portion of the Illinois River Watershed
23 would result in required loading reductions for both
24 point sources and nonpoint sources?

25 A. Yes.

1 Q. Would you tell the court, please, what point
2 sources exist in the Oklahoma portion of the IRW.

3 A. For the Illinois River, the city of Tahlequah
4 and the city of Westville, city of Stillwell
5 discharges to an arm of Lake Tenkiller.

6 Q. Do each of these point sources have Clean Water
7 Act NPDES permits?

8 A. Yes, they do.

9 Q. Do each of these permits have phosphorus
10 limits?

11 A. Yes.

12 Q. Would you tell the court what your agency's
13 authority and responsibility is regarding these
14 permits to ensure any load reductions that might be
15 required by a TMDL?

16 A. It's our responsibility to set limits in the
17 permit to meet the requirements of the TMDL.

18 Q. And if a reduction was required in loading,
19 would there have to be lower limits in the permits?

20 A. Yes.

21 Q. Would any phosphorus limit reductions be merely
22 voluntary, or can they be legally required of permit
23 holders?

24 A. They are legally required.

25 Q. Can you give the court, please, an example of

1 how such a point source load reduction might be
2 achieved in order to comply with the TMDL?

3 A. Well, there's probably three basic ways that
4 that would be done: An addition to the current
5 treatment, a change in the treatment, change in
6 technology. In extreme cases, taking the discharge
7 out of the watershed.

8 Q. Would either of these alternatives be expensive
9 for the municipalities involved?

10 A. Yes.

11 Q. Can permit holders avoid a required permit
12 reduction if that reduction is too expensive?

13 A. No.

14 Q. Is there any agency of the state of Oklahoma
15 that provides loans to municipalities needing to
16 meet permit requirements?

17 A. Yes, the Oklahoma Water Resources Board.

18 Q. Now, what is the DEQ's authority and
19 responsibility regarding -- we'll focus on
20 poultry -- regarding reducing poultry litter-based
21 nonpoint source phosphorus loadings to ensure load
22 reductions required by a TMDL?

23 A. Well, we have no authority. We can make
24 recommendations in the TMDL, but we have no
25 authority to make those reductions.

1 Q. And why is that, sir?

2 A. Because the -- those provisions of the Clean
3 Water Act have been assigned to the Oklahoma
4 Department of Agriculture.

5 Q. Does the Clean Water Act itself give the State
6 any additional authority other than in state law to
7 reduce nonpoint source pollution?

8 A. No.

9 Q. If you can't require a nonpoint source load
10 reduction under a TMDL, what can be done?

11 A. Well, you can make recommendations and you can
12 implement Best Management Practices.

13 Q. To your knowledge, does any agency of the
14 Oklahoma government have the legal authority to
15 enforce an agricultural nonpoint source load
16 reduction that might be required in a TMDL for the
17 Oklahoma part of the watershed?

18 A. If that does exist, it exists with the
19 Department of Agriculture.

20 Q. Do you know specifically what their authority
21 might be?

22 A. No.

23 Q. You indicated in your deposition testimony that
24 was played before Christmas that you believe the
25 process, as presently constituted, is unfair or

1 inequitable. Would you tell the court why that is,
2 please.

3 A. I think there are two reasons. The current
4 process tends to ignore higher levels of loading on
5 both sides. And by cutting out those higher levels
6 of loading, I believe it skews --

7 THE COURT: What do you mean by both sides,
8 on both sides?

9 THE WITNESS: It cuts out for both -- those
10 for low flow and high flow. High flow generally
11 attributed to nonpoint source. Low flow attributed
12 to point source. It cuts out, as anomalous, the
13 higher readings.

14 Because point sources are taken -- are
15 constant in their discharge, the anomalies are not
16 as great for point sources as they are for nonpoint
17 sources. So we believe that it skews the process in
18 favor of nonpoint source.

19 The second issue is that there is no
20 specific number of samples that are required on
21 either side. There are some general requirements,
22 but no specific requirements. And the DEQ believes
23 until there's some specificity brought to that
24 issue, that it will continue to be skewed in favor
25 of nonpoint sources.

1 THE COURT: Would you see if you can
2 clarify that a little bit.

3 MR. NANCE: Okay. I will.

4 Q. (By Mr. Nance) In the sampling protocol --
5 first of all, is the sampling protocol something
6 that your agency does, or does some other agency
7 determine that?

8 A. Most of the sampling is done by either the
9 Oklahoma Water Resources Board or the Conservation
10 Commission. The DEQ does very limited sampling.

11 Q. But the protocols about how the sampling is
12 done, who is responsible for that?

13 A. The protocol is the responsibility of the
14 Oklahoma Water Resources Board.

15 Q. In that protocol, and I'm talking about the
16 Illinois River Watershed here, a scenic river and an
17 impaired waterbody, does the protocol call for a
18 certain number of high-flow-samples if you can get
19 them?

20 A. Yes.

21 Q. Does it set any number of low flow or
22 base-flow-samples that need to be taken?

23 A. No.

24 Q. As a result in that, are there more
25 base-flow-samples or high-flow-samples that are

1 taken?

2 A. Generally, there are more base-flow-samples
3 taken.

4 Q. And is this -- as the standard works out, is it
5 some sort of a rolling average of all of those
6 samples, monthly rolling average?

7 A. Yes.

8 Q. As a result of having more low-flow-samples
9 taken and this rolling average, does that tend to
10 weight more heavily for high-flow-samples or
11 low-flow-samples?

12 A. Low-flow-samples.

13 Q. Now, as we study the watershed, have we
14 determined or has -- are you aware of whether or not
15 most of the phosphorus loading occurs during
16 high-flow-times or low-flow-times?

17 A. Most of the phosphorus loading occurs during
18 high-flow-times.

19 Q. So if the sampling regime just works in favor
20 of low-flow-times , does that mean that we're just
21 not capturing for that purpose a lot of the
22 high-flow-loading?

23 A. Yes.

24 MR. NANCE: Your Honor, does that meet your
25 need?

1 THE COURT: Well, I see now where he's
2 coming from. Go ahead.

3 Q. (By Mr. Nance) Now, if just the way the
4 sampling is done and if a TMDL were completed, would
5 that mean that point sources that are included in
6 that TMDL would incur an unfairly expensive
7 requirement to meet a TMDL load reduction?

8 A. Yes.

9 Q. What steps, if any, have you taken to try to
10 resolve this unfair situation?

11 A. I asked our retired water quality division
12 director Jon Craig to work with the water board to
13 resolve the issue.

14 Q. And has it been resolved, to your knowledge, at
15 this point?

16 A. No.

17 Q. In your deposition that was played before
18 Christmas, you said that a TMDL was the best way we
19 have to manage multiple sources in a watershed to
20 achieve a water quality objective. Do you remember
21 that testimony?

22 A. Yes.

23 Q. Based upon your years in the environmental
24 protection business in this state, does the Oklahoma
25 portion of the IRW receive phosphorus loading that

1 originates in the state of Arkansas?

2 A. Yes.

3 Q. To your knowledge, does any agency of the state
4 of Oklahoma have the authority to enforce TMDL
5 restrictions for that Arkansas-based loading?

6 A. No.

7 Q. Do you know to what extent any agency of the
8 state of Arkansas has legal authority to enforce
9 nonpoint source loading for its side of the
10 watershed?

11 A. No.

12 MR. NANCE: Nothing further, Your Honor.

13 THE COURT: When did you ask Jon Craig to
14 work with the water board to resolve this issue?

15 THE WITNESS: I don't know the exact date,
16 but it's probably been a couple of years ago.

17 THE COURT: How many years?

18 THE WITNESS: Two.

19 THE COURT: So 2007 or 2008?

20 THE WITNESS: I would say 2007.

21 THE COURT: Do you know whether Jon Craig
22 has done anything to attempt to resolve the issue?

23 THE WITNESS: He reported to me that he
24 continues to work with the Oklahoma Water Resources
25 Board to resolve the issue.

1 THE COURT: Cross-examination -- or
2 redirect, rather.

3 **REDIRECT EXAMINATION**

4 BY MR. MCDANIEL:

5 Q. Good morning, Mr. Thompson. How are you?

6 A. Good morning.

7 Q. I appreciate you working with us on the
8 schedule so we can try to get this done.

9 Mr. Thompson, let me follow up on several
10 things Mr. Nance asked you. And in particular, I
11 want to follow up on this status of the Oklahoma
12 TMDL. You said that Mr. Craig is retired.

13 A. Yes, he retired at the end of the year.

14 Q. 2009?

15 A. Yes.

16 Q. Okay. So if he's retired, who now has that
17 mantle for ODEQ to carry your message to the water
18 board?

19 A. Our new water quality division director is
20 Shelly Chard, C-H-A-R-D, hyphen, McClary,
21 M-C-C-L-A-R-Y.

22 Q. Have you had a conversation with her, sir,
23 about the issues you've discussed with us with
24 regard to the TMDL?

25 A. Yes.

1 Q. And do you and she have an action plan?

2 A. I -- she is relatively new in her job, but her
3 action plan would be to continue the effort that
4 Mr. Craig had to work with the Water Resources
5 Board.

6 Q. As part of your role as director of the
7 Oklahoma Department of Environmental Quality, do you
8 have a direct conduit of communication with the
9 director of the Water Resources Board?

10 A. Yes.

11 Q. And is that Mr. Smith?

12 A. Yes.

13 Q. Duane Smith. Have you and Mr. Smith discussed
14 these issues you have with the protocols for the
15 Scenic River criteria?

16 A. I don't recall that conversation, no.

17 Q. Is there a particular reason the two of you
18 have not spoken about this?

19 A. Well, this was an issue that was worked out in
20 a technical work group that included other agencies,
21 so that's the reason.

22 Q. Is there anything prohibiting you from speaking
23 directly with Mr. Smith to try to get this resolved?

24 A. No.

25 Q. If I understand -- let me back up before I

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1 change gears here. Is it your intention to speak to
2 Mr. Smith to get this resolved?

3 A. It may become necessary, yes.

4 Q. What would precipitate, in your view, it
5 becoming necessary, if it's not necessary today?

6 A. I think Ms. McClary should continue to work
7 with the staff of the water board to resolve the
8 issues, and if that doesn't occur at some point,
9 well, then, I would speak with Duane.

10 Q. If I understand where we are, sir, the status
11 of this issue really hasn't changed since you and I
12 spoke at your deposition in April?

13 A. That's correct.

14 Q. April of 2009. At the time we spoke at your
15 deposition, you had not established a time period by
16 which this needs to be resolved. Have you now, sir?

17 A. No.

18 Q. Your -- I appreciate your explanation of why
19 you think the current formulation would not provide
20 for an equitable treatment between point and
21 nonpoint sources.

22 Let me make sure I understand what the
23 source of the specific requirements are that are
24 causing you the problem. And so tell me if I'm
25 correct in this, sir, that, first off, this relates

1 to the Scenic Rivers criterion of 0.037 milligrams
2 per liter of phosphorus?

3 A. No, it does not.

4 Q. Tell me where the protocols reside that are
5 causing you the problem.

6 A. They are in the implementation plan for
7 development of TMDLs, the sampling protocols that
8 are within the -- the responsibility of the Oklahoma
9 Water Resources Board.

10 Q. This set of protocols, is it specific to the
11 waters of the Illinois River Watershed, or is this a
12 statewide protocol?

13 A. It is a statewide protocol.

14 Q. Is it within the power -- to your knowledge, is
15 it within the power of the Water Resources Board to
16 adjust those protocols?

17 A. Yes.

18 Q. Is it within the power of the Water Resources
19 Board to adjust those protocols to adapt to the
20 circumstances present in the Illinois River
21 Watershed?

22 A. Yes.

23 Q. Would the Water Resources Board need to do that
24 through a rule-making process?

25 A. I'm not sure.

1 Q. They have it within their statutory power to do
2 it. We wouldn't need legislation, I guess is the
3 question.

4 A. We would not need legislation, that's correct.

5 Q. If they made the decision -- if the water board
6 agreed that adjustments needed to be made, and
7 agreed with your view, given your experience in
8 Oklahoma government, about how long would it take to
9 effect a change in those protocols?

10 A. This resides within a implementation plan. And
11 whether that -- a change in that implementation plan
12 would need to go through the rule-making process, I
13 don't know.

14 Q. I'm trying to make sure I understand the
15 testimony you gave with regard to sampling. Your
16 concern is that you think the implementation plan
17 should required a minimum number of
18 high-flow-samples within the average?

19 A. We think -- I think -- we believe that there
20 should be a specific number of samples for both high
21 flow and low flow. We also believe that once the
22 data is captured, it should be considered.

23 Q. Explain that last statement, sir. I don't
24 understand that.

25 A. If you capture data at high flow or low flow,

1 the current protocol cuts out what they believe to
2 be anomalies. We believe that it should consider
3 all of that data.

4 Q. If I think -- I think I understand what you
5 just said, sir. Is that because the standard is
6 based upon a geometric mean of the data where you
7 take out the highest and lowest values?

8 A. Yes.

9 Q. I just want to make sure we're clear and -- the
10 geometric mean is an element of the Scenic Rivers
11 standard, right, 30-day geometric mean?

12 A. I'm not sure of that.

13 Q. All right. So you think all data should go
14 into that rolling average?

15 A. Sure. Yes.

16 Q. Do you -- are you aware, sir, of what the Water
17 Resources Board opinion is about that?

18 A. They believe that they should use the geometric
19 mean.

20 Q. Do you know, sir -- do you have any experience
21 or knowledge whether water quality standards in
22 other states typically use the geometric mean
23 approach or whether they use just the raw average,
24 as you suggest?

25 MR. NANCE: Object as beyond the scope of

1 cross.

2 THE COURT: Overruled.

3 THE WITNESS: No.

4 Q. (By Mr. McDaniel) You're just not aware?

5 A. I'm not aware, no.

6 Q. Has there someone from your technical staff
7 given you their technical viewpoint that this
8 geometric mean is not an appropriate methodology?

9 A. Yes.

10 Q. Who is that, sir?

11 A. Jon Craig.

12 Q. If the Water Resources Board does not respond,
13 what course of action do you have?

14 A. Well, we have continued to do TMDLs. We have
15 500 or more of those to do. We are concentrating on
16 watersheds that do not have point sources or where
17 there is a need by a community to have a TMDL done.

18 So it is really a matter of priority in
19 order to meet -- in order to try to work through
20 this issue.

21 We will continue to do TMDLs as required by
22 federal law.

23 Q. Well, my question specifically, sir, was
24 addressing the issue with the Illinois River
25 Watershed. First let me ask this: How does the

1 Illinois River Watershed rank in the list of
2 priorities for TMDLs?

3 A. It would be a high priority if we could work
4 through this issue.

5 Q. Okay. Returning to my prior question. If the
6 Water Resources Board does not respond and engage
7 you or your staff in the discussion of these
8 concerns, what options under law do you have?

9 A. We have the -- we have no option but to do a
10 TMDL.

11 Q. According to the standards as written?

12 A. Yes.

13 Q. If you are engaged by the Water Resources Board
14 in a technical discussion of these different
15 viewpoints and you simply cannot agree, or the Water
16 Resources Board does not agree, are your positions
17 the same, that being you must proceed by law to
18 generate the TMDL?

19 A. Yes.

20 Q. Sir, how will we know when we are at that point
21 where you recognize that you are at an impasse and
22 that you have no other choice but to comply with law
23 and release this project for completion?

24 A. Well, we will continue -- I've asked
25 Ms. McClary -- Chard-McClary to work with the water

1 board. At some point when we are told -- it's my
2 understanding they've continued to evaluate it and
3 have not made that decision.

4 If at the point the water board makes the
5 decision that they're not going to change it, that's
6 when we would do so.

7 Q. Okay, sir. And my specific question is, we're
8 in a court of law, we have the judge on the bench
9 who's a decision maker, and I think it's important
10 to know, sir, can you tell this court, give this
11 court a time frame or a date by which this will
12 either be resolved between your two agencies or not,
13 meaning that you will then have to proceed to
14 develop the TMDL as required by law?

15 A. It would depend upon the water board making a
16 final decision that they are not going to change.

17 Q. I don't want to argue with you, sir. Do you
18 understand my question? How long will this go on
19 until you recognize it's not going anywhere with the
20 water board and you're going to have to issue the
21 order to your staff to develop the TMDL?

22 MR. NANCE: I object as asked and answered,
23 Your Honor.

24 THE COURT: Overruled.

25 THE WITNESS: I -- we will continue to work

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1 with the water board to establish a change. At the
2 point where the water board decides that they are
3 not going to change, definitively they are not going
4 to change -- it's not my understanding that that has
5 occurred -- but at the point when they make that
6 decision, we will have no choice but to go forward.

7 Q. (By Mr. McDaniel) All right. Out of respect
8 for you and your position, sir, I'm not going to
9 argue with you further. But you can't give the
10 court a date, can you?

11 A. Well, I can tell you that we are going to
12 pursue it. I can tell you that we will continue to
13 try to work through the technical issues. I can't
14 tell you when the water board will definitively make
15 that decision.

16 Q. All right.

17 THE COURT: A couple of questions here.
18 Down to brass tacks here. In terms of point source,
19 because you contend that requiring the geometric
20 mean unfairly points to point sources, which of
21 these wastewater treatment plants do you suspect
22 would require these expensive upgrades or changes in
23 the event that the sampling regime or protocol is
24 not changed? Tahlequah?

25 THE WITNESS: Tahlequah and Westville.

1 THE COURT: Westville. Those two
2 primarily?

3 THE WITNESS: Yes.

4 THE COURT: Now, you also said, both in
5 your deposition and here today, that you're
6 concentrating -- you're doing TMDLs on watersheds
7 that do not have point sources, correct?

8 THE WITNESS: That's correct.

9 THE COURT: All right. But you also said
10 you're doing TMDLs "where there is a need by a
11 community to have a TMDL done." So that would
12 suggest to me that in some cases, you are doing
13 TMDLs where there are point sources; is that
14 correct?

15 THE WITNESS: That is correct.

16 THE COURT: All right. How are you
17 distinguishing, then, between those watersheds on
18 which there are point source discharges where you've
19 decided to ignore this problem that you have with
20 the geometric mean and you're doing the TMDLs, and
21 those watersheds where you've made, as you say, the
22 policy decision yourself?

23 And to your credit, in your deposition,
24 you've taken the responsibility here. How are you
25 distinguishing? Because I have in my hand the TMDL

1 that you recently did on Spavinaw. And Spavinaw, as
2 you point on page 14 of that TMDL, city of Decatur
3 is a point source discharge.

4 So just within the last few months, you did
5 a final TMDL on Lakes Eucha and Spavinaw; is that
6 correct?

7 THE WITNESS: That's correct.

8 THE COURT: So how are you distinguishing
9 between those TMDLs where you've decided to ignore
10 your problem with geometric mean and those
11 watersheds in which you've held up on the TMDL?

12 THE WITNESS: If I could give a couple of
13 examples.

14 THE COURT: Please.

15 THE WITNESS: We are currently engaged in a
16 TMDL on the North Canadian River in Oklahoma City.
17 That waterbody is --

18 THE COURT: It's the Oklahoma River now,
19 right?

20 THE WITNESS: I'm sorry, the Oklahoma
21 River, that's correct. Old habits die hard, I
22 suppose.

23 THE COURT: I'm the same way. Go ahead.

24 THE WITNESS: That waterbody is impaired
25 for bacteria. And as you may recall, last summer

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1 there was an event in Oklahoma City in which people
2 got in the river and became ill as a result of that.

3 THE COURT: That was the --

4 THE WITNESS: Triathlon.

5 There is an interest, an overriding
6 interest by the City of Oklahoma City to address
7 bacteria in the Oklahoma River.

8 My staff has been asked to discuss with the
9 cities like that what we believe is an unfair --
10 this unfair issue. But the desire by the City was
11 so overriding in that particular case that they were
12 willing to have us go forward with the TMDL in spite
13 of what we believed was an unfair -- an unfair issue
14 with point sources.

15 There are times when, because of growth or
16 because of new industries or because of some other
17 issue, that a City must increase its load and we
18 must do a TMDL on an impaired stream so that we can
19 -- so that they can treat -- take care of either
20 growth or industries coming into that community.

21 In those cases, we have gone forward with
22 the TMDL process, again, because of -- in spite of
23 our warning to these cities, there's an interest in
24 those cities or, in some cases, with industries to
25 go forward.

1 In the case of Eucha-Spavinaw, there was --
2 I believe there was a statutory requirement. There
3 was -- the City of Tulsa went to the legislature and
4 asked that this TMDL process be done so that they
5 could address the impairments in that particular
6 watershed.

7 In all honesty, Your Honor, I don't
8 remember whether that legislation passed or not, but
9 there was clearly interest on the part of the City
10 of Tulsa to do a TMDL for that -- for those
11 purposes. And so in spite of these -- what we
12 considered to be unfair treatment to those
13 communities, they decided that there was an
14 overriding policy issue important to them to go
15 forward with it, and so we decided to go forward.

16 THE COURT: Mr. McDaniel.

17 Q. (By Mr. McDaniel) Mr. Thompson, I know you
18 weren't necessarily involved in filing this lawsuit,
19 but would you agree, sir, that this lawsuit
20 indicates the State of Oklahoma is interested in the
21 Illinois River Watershed?

22 A. Yes.

23 Q. Can you tell me, sir, how the initiative that
24 the EPA has started this fall is affecting, if at
25 all, your decisions with regard to promulgating the

1 Oklahoma TMDL?

2 MR. NANCE: Object as beyond the scope of
3 cross.

4 THE COURT: Overruled.

5 Q. (By Mr. McDaniel) Did you understand my
6 question?

7 A. No, I don't understand.

8 Q. I realize from your expression, I may have
9 asked a poor question. Are you aware that EPA has
10 engaged the process with both Oklahoma and Arkansas
11 to develop a two-state TMDL?

12 A. Yes.

13 Q. How is that relevant, if at all, to the
14 decisions you are pondering with regard to any TMDL
15 for the Oklahoma side?

16 A. Well, it is an artifact, but the policy extends
17 statewide. And so we view this as a statewide
18 policy, as a statewide issue to try to solve this
19 problem. So it is -- I don't know exactly how to
20 answer your question, honestly. It is in our mind,
21 but the policy relates not to just phosphorus, to
22 all criteria where there's an impact from nonpoint
23 sources. So it's a broader issue for us than just
24 the Illinois River.

25 Q. Even if you agree with the water board on a

1 change in the implementation plan, the Scenic River
2 criteria still requires a geometric mean. How are
3 you going to address that?

4 A. I don't know.

5 Q. That's statutory, isn't it?

6 A. I don't know that.

7 MR. MCDANIEL: May I approach, Your Honor?

8 THE COURT: You may.

9 Q. (By Mr. McDaniel) Mr. Thompson, I've handed
10 you what's been admitted into evidence as
11 Defendants' Joint Exhibit 8090.

12 A. Uh-huh.

13 Q. I assume you received a copy of the letter
14 dated October 1, 2009 from Miguel Flores, acting
15 deputy regional administrator of EPA Region 6 that
16 was addressed to Teresa Marks at Arkansas Department
17 of Environmental Quality and J.D. Strong at the
18 Oklahoma Secretary of Environment's office?

19 A. Yes.

20 Q. Can you tell me how and when you received a
21 copy of this?

22 A. Not specifically. It wasn't addressed -- I
23 wasn't copied on the letter.

24 Q. I notice Mr. Jon Craig at the Oklahoma
25 Department of Environmental Quality was copied. Did

1 he provide you materials?

2 A. I suspect it was either Mr. Craig or
3 Mr. Strong.

4 Q. This letter says on its face -- it's got a date
5 stamped on it, October 1, 2009. Do you recall when
6 you received a copy of this?

7 A. Not specifically.

8 Q. Before the time you had this letter in hand,
9 were you aware that Region 6 was moving in this
10 direction?

11 A. Yes.

12 Q. So this -- the information in this letter
13 itself wasn't a surprise to you?

14 A. No.

15 Q. Now, for how long have you had an understanding
16 that EPA Region 6 was going to work on this
17 two-state effort?

18 A. Oh, I -- probably not more than a couple of
19 months before the letter.

20 Q. Let's look at the very first sentence in the
21 letter. It says, "Over the past several months, our
22 agencies have focused considerable attention on
23 nutrient concerns in the Illinois River Watershed in
24 northeast Oklahoma and northwest Arkansas."

25 Sir, is ODEQ included within that

1 description? Has ODEQ been focusing considerable
2 attention on nutrient issues in the Illinois River
3 Watershed?

4 A. On point sources, yes.

5 Q. All right. The second paragraph, the first
6 sentence, Mr. Flores states, "As we have recently
7 been discussing, over the next 12 to 18 months, EPA
8 will develop a scientifically robust model of the
9 Illinois River Watershed, incorporating all relevant
10 segments and nutrient sources in both Arkansas and
11 Oklahoma."

12 Is this consistent, sir, with your
13 understanding of EPA's plans to issue a two-state
14 total maximum daily load within 12 to 18 months?

15 A. Yes.

16 Q. And is it your understanding, sir, that EPA's
17 intention is that this TMDL will address all
18 nutrient sources in Arkansas and Oklahoma, both
19 point and nonpoint?

20 A. Yes.

21 Q. All right. Let's continue in that paragraph.
22 He says, "EPA's purpose in this effort is to provide
23 a technically sound basis upon which regulatory and
24 nonregulatory decisions can be confidently based,
25 decisions which will lead to reductions of nutrients

1 from both point and nonpoint sources of nutrients in
2 the watershed."

3 Sir, do you agree that EPA's desire for the
4 outcome of this TMDL is a technically sound basis
5 for making regulatory and nonregulatory decisions to
6 address the reduction of nutrients from both point
7 and nonpoint sources in the watershed?

8 A. Well, I can tell you that that's what the
9 letter states, yes.

10 Q. Okay. Do you have -- do you have a belief that
11 EPA's intention is different than stated here, sir?

12 A. Well, not their intention, no.

13 Q. All right. Now, in the third paragraph at the
14 bottom, there's mention here that Oklahoma is
15 requested to name a technical liaison for the TMDL
16 project.

17 A. Yes.

18 Q. Who has Oklahoma designated for that purpose?

19 A. Well, at the beginning of this, it was Jon
20 Craig. It will now be Shelly McClary.

21 Q. Now, what will her duties and assignments be
22 through the course of this project with relationship
23 to this project?

24 A. She will coordinate with the Environmental
25 Protection Agency in the state of Arkansas. She

1 will provide information. And she will assess the
2 technical basis on which the model and the process
3 will proceed.

4 Q. As far as Oklahoma's comments, feedback, will
5 she be the conduit into the EPA process for -- let
6 me put it this way. Will she be Oklahoma's voice at
7 the table in this process?

8 A. Yes.

9 Q. Turn to the second page of the letter, please,
10 sir. Let me read a little bit from this top
11 paragraph. Mr. Flores says, "We expect this
12 modeling effort may lead to the development of one
13 or more Total Maximum Daily Loads for the Illinois
14 basin. EPA will take the lead in developing such
15 TMDLs, and we encourage active participation by both
16 Oklahoma and Arkansas. Along with the modeling
17 work, we are now initiating other factors that may
18 influence future TMDL decisions for the basin."

19 Sir, do you know what Mr. Flores is
20 referring to when he says, "other factors that may
21 influence future TMDL decisions for the basin"?

22 A. Not specifically, no.

23 Q. Well, if you look in that -- continuing in the
24 paragraph, he makes reference here to a
25 reevaluation -- excuse me, "Oklahoma's reevaluation

1 of the phosphorus criteria for Scenic Rivers
2 pursuant to the 2003 statement of joint principles
3 and actions." Do you see that?

4 A. Yes.

5 Q. Do you believe that may be one of the factors
6 Mr. Flores is referring to?

7 A. It may be.

8 Q. Sir, to your knowledge, did Oklahoma commit in
9 the 2003 statement of joint principles to reevaluate
10 the 0.37 Scenic River phosphorus standard by 2012?

11 A. Yes.

12 Q. If I understand the dialogue that we had at
13 your deposition and that we've had this morning
14 before the court, your desire that the criteria or
15 implementation criteria be reevaluated is something
16 that could be addressed as part of reevaluating the
17 Scenic Rivers standard; do you agree? Particularly
18 the geometric mean and the number of samples.

19 A. It could be, yes.

20 Q. Sir, to your knowledge, does the State of
21 Oklahoma intend to fulfill this commitment by
22 reevaluating the Scenic Rivers standard?

23 A. It does not fall within my jurisdiction, but to
24 the best of my knowledge, it does, yes.

25 Q. Tell me, if you can, sir, what you know about

1 the timing for reevaluating the Scenic Rivers
2 standard.

3 A. I don't know anything about it.

4 Q. Sir, do you know whether the Oklahoma Water
5 Resources Board is now accepting comments with
6 regard to its triennial review of Oklahoma water
7 quality standards?

8 A. I don't know that specifically.

9 Q. Does ODEQ have any role in that process?

10 A. Well, we, as with any state agency, will have
11 comments on the process.

12 Q. Is it normal for your office to remain apprised
13 of what's going on in the Water Resources Board with
14 regard to water quality standards?

15 A. Yes.

16 Q. But you don't know if OWRB is in the midst of
17 its triennial review as we speak?

18 A. I know there's been some discussion of it, but
19 whether they are in the midst of it, I don't know.

20 Q. Sir, do you know whether the Water Resources
21 Board has included the 0.37 milligram per liter
22 scenic river standard among the standards it intends
23 to review during this triennial review?

24 A. No.

25 Q. Now, with regard to the EPA initiative, sir,

1 were you aware that EPA convened a meeting on
2 November 20, 2009 in Dallas to discuss the project?

3 A. Yes.

4 Q. And who was present for the State of Oklahoma?

5 A. Jon Craig was present, Mark Derichsweiler was
6 present.

7 Q. You've already told us who Jon Craig is. Who
8 is Mark Derichsweiler?

9 A. He is a program manager in the water quality
10 division.

11 Q. And I've had the pleasure of meeting
12 Mr. Derichsweiler and actually deposing him three
13 times in this case. Part of his job in his
14 division, sir, is the TMDL work; is that right?

15 A. Yes, that's correct.

16 Q. So when Oklahoma issues contracts and receives
17 work product relative to TMDLs, that is
18 Mr. Derichsweiler's department?

19 A. That's correct.

20 Q. He's certainly knowledgeable on TMDLs?

21 A. Yes.

22 Q. Okay. To your knowledge, were representatives
23 of the state of Arkansas also at this meeting in
24 Dallas?

25 A. They were.

1 Q. Tell me, sir, what were the objectives of the
2 meeting?

3 A. It's my understanding --

4 MR. NANCE: Your Honor, we have gone well
5 beyond the scope of cross at this point.

6 THE COURT: I understand. Your response.

7 MR. MCDANIEL: Well, Your Honor, there's
8 really two aspects of this that Mr. Nance has opened
9 the door to. Number one is the whole question of
10 TMDL and what is going to be the future with TMDL in
11 the IRW is very much what we've been talking about.

12 Number two, Mr. Nance made the point with
13 Mr. Thompson that essentially the State of Oklahoma
14 and the agencies such as ODEQ and ODAFF had no power
15 to have an effect on what is going on in Arkansas.
16 What's going on with the EPA is very much relevant
17 to that, and I think the court would be well served
18 by being informed on the process.

19 THE COURT: I think the door has been
20 opened to this subject. It's central to this
21 dispute. Overruled. Go ahead.

22 MR. MCDANIEL: Thank you.

23 Q. (By Mr. McDaniel) Do you recall the question
24 that was pending, sir?

25 A. I don't.

1 Q. The question was: Tell us what you can about
2 the purposes of the meeting in Dallas.

3 A. It was, to the best of my knowledge, an
4 organizational meeting. It was a meeting in which
5 all the parties got together. They discussed the
6 processes -- or at least the models. There was some
7 discussion of schedule, things of that nature.

8 Q. Kind of a kickoff meeting?

9 A. Kind of a kickoff meeting.

10 Q. Good enough. Now, did Mr. Craig or
11 Mr. Derichsweiler bring back to you and provide you
12 a copy of the official meeting notes?

13 A. Yes.

14 MR. MCDANIEL: May I approach, Your Honor?

15 THE COURT: You may.

16 Q. (By Mr. McDaniel) Mr. Thompson, I've handed
17 you what's marked for identification as Defendants'
18 8125. Do you recognize this as the attendance
19 roster and the meeting notes issued by EPA from the
20 meeting in November, 2009?

21 A. Yes.

22 Q. Were -- to your knowledge, were these notes
23 provided to all attendees of EPA?

24 A. To my knowledge.

25 MR. MCDANIEL: Your Honor, this document,

1 this Exhibit 8125 was not listed on the pretrial
2 order clearly because it didn't exist at the time
3 the pretrial order was prepared. Defendants do
4 offer 8125 for admission. We think in the interest
5 of justice, it is justified, given how central to
6 the issues in this case this information is, and the
7 fact that defendants obviously couldn't list it by
8 the pretrial deadline.

9 And secondly, Your Honor, offering this --
10 or accepting this into evidence is not going to
11 prejudice the State. The State was present at the
12 meeting and, in fact, knew about it before we did.

13 THE COURT: Well, is there anything about
14 this particular document that does more than simply
15 reflect Mr. Craig's and Mr. Derichsweiler's
16 attendance at the meeting?

17 MR. MCDANIEL: Yes, sir, it reflects the
18 intentions -- it reflects EPA's plan that I think we
19 have not been able -- up to this point been able to
20 provide to the court much detail about EPA's
21 intended course of action. And I think --

22 THE COURT: Well, the letter file-stamped
23 October 1 has been admitted into evidence here,
24 correct?

25 MR. MCDANIEL: That is correct.

1 THE COURT: Does this document do anything
2 further?

3 MR. MCDANIEL: Well, it does, Your Honor.
4 It speaks in terms of models that are going to be
5 considered, contractor that's been retained, data
6 that is going to be collected, information about
7 stakeholder meetings that are anticipated, roles
8 that each of the states will play in the process.

9 And just so the court can understand where
10 I'm going here, after I ask a few questions about
11 this, there was a PowerPoint presentation provided
12 at the meeting, and my expectation is to want to
13 offer that to the court, which also includes a
14 detailed time line for the work project.

15 THE COURT: Any objection?

16 MR. NANCE: Your Honor, it is hearsay, and
17 there's no foundation with this witness because he
18 did not attend the meeting.

19 THE COURT: Sustained. I do note, however,
20 that apparently the EPA agrees with the court that
21 the Cherokee tribe has potential interest here.

22 MR. MCDANIEL: Your Honor, I --
23 alternatively, as far as authentication and
24 identification, this was -- through the testimony of
25 Mr. Thompson, this was brought back to him by the

1 attendees at the meeting. There's not much question
2 about the apparent reliability that it is what it
3 purports to be.

4 And with regard to the hearsay question,
5 Your Honor, I think the court could accept this not
6 for the truth of the matter asserted but for,
7 rather, its relevance, because the EPA has explained
8 to Oklahoma its view of what needs to be done, what
9 will be done and what its planned time frame is and
10 what it expects from the State of Oklahoma. So as a
11 matter of notice, I think the court could receive it
12 for that purpose.

13 MR. NANCE: All of that is for the truth.

14 THE COURT: I think so. Mr. Nance is
15 correct. Sustained.

16 MR. MCDANIEL: All right.

17 Q. (By Mr. McDaniel) The -- Mr. Thompson, do you
18 know, sir, that EPA has determined and, in fact,
19 hired the contractor who will be doing the work?

20 A. I do not.

21 Q. You don't know whether that's occurred or not?

22 A. I do not.

23 Q. The -- do you know that EPA has narrowed the
24 models that it will consider for use in the project?

25 A. I do not.

1 Q. You do know this is about developing a model?

2 A. Yes.

3 Q. All right. You are aware, sir, that in the
4 course of this litigation that Dr. Bernard Engel was
5 working for the State's counsel, purported to model
6 the Illinois River Watershed using a combination of
7 GLEAMS field scale model coupled with a routing
8 equation, are you aware of that?

9 MR. NANCE: I object, we're beyond the
10 scope.

11 THE COURT: Sustained.

12 MR. MCDANIEL: Your Honor, it relates to
13 the EPA modeling, if I might.

14 THE COURT: Sustained.

15 Q. (By Mr. McDaniel) Sir, have you received any
16 notice from Mr. Craig or Mr. Derichsweiler that the
17 work that was performed with the GLEAMS model by
18 Dr. Engel will be any component of the work
19 performed by the EPA?

20 MR. NANCE: Again, beyond the scope.

21 THE COURT: Sustained.

22 Q. (By Mr. McDaniel) Mr. Thompson, what's ODEQ's
23 role going to be in gathering information for this
24 project?

25 A. Well, we will -- there's substantial data that

1 is -- has been collected by federal agencies, the --
2 by the Oklahoma Water Resources Board, by the
3 Conservation Commission and other sources.

4 Our role will be, as far as providing data,
5 to provide that data to the Environmental Protection
6 Agency.

7 Q. What's the status of that work today, sir?

8 A. I don't know.

9 Q. Who's the lead person to see that that work is
10 completed?

11 A. That will be Shelly McClary.

12 Q. Sir, are you aware that the EPA and its
13 contractor have actually issued a draft quality
14 assurance project plan and work plan for the
15 modeling?

16 A. No.

17 Q. Sir, did Mr. Craig or Mr. Derichsweiler bring
18 back to you a copy of a PowerPoint presentation that
19 was made by EPA at the November meeting?

20 MR. NANCE: Your Honor, beyond the scope.
21 And if they did, it would be hearsay.

22 MR. MCDANIEL: Well, I haven't offered it
23 yet, Your Honor, so I'm just trying to establish --

24 THE COURT: A little early. Go ahead.

25 Q. (By Mr. McDaniel) Do you recall the question,

1 sir?

2 A. Yes, they did.

3 MR. MCDANIEL: May I approach, Your Honor?

4 THE COURT: You may.

5 Q. (By Mr. McDaniel) Mr. Thompson, I've handed
6 you what's marked for identification as Defendants'
7 Joint Exhibit 8131. Do you recognize this?

8 A. Yes.

9 Q. What is it?

10 A. This is the PowerPoint that they brought back
11 from the meeting.

12 Q. And this -- who put on this presentation?

13 A. I don't know.

14 Q. Your people didn't put it on, did they?

15 A. No.

16 Q. Who gave this to you, I'm sorry?

17 A. Mr. Derichsweiler gave it to me.

18 Q. All right. And Mr. Derichsweiler told you it
19 was provided to him at the meeting?

20 A. Yes.

21 MR. MCDANIEL: Your Honor, based upon the
22 same foundation and reasons discussed with the --
23 Your Honor, based upon the prior foundation and
24 arguments I made with the prior exhibit, in addition
25 to the fact that I think this document qualifies

1 under the hearsay exception as a document and report
2 reflecting activities of the agency, and I think the
3 court can fairly consider the residual exception.
4 It's rather -- the indicia of reliability here, I
5 think, are strong. And so defendants offer for
6 admission 8131.

7 THE COURT: Mr. Nance.

8 MR. NANCE: Your Honor, I believe it is
9 hearsay. It's certainly not your typical government
10 report. As far as activities of the agency, this is
11 not the sort of thing that EPA is reporting on its
12 typical activities, but it's about a specific event,
13 the meeting which you have heard described to you.
14 I don't believe it's admissible. I think it still
15 is hearsay.

16 MR. MCDANIEL: Your Honor, I think this is
17 the last opportunity in this trial that the court is
18 going to have to gain information about what's going
19 on with this report and the EPA activity. There's
20 really not much challenge to the reliability of the
21 document. And whether you want to view this from a
22 hearsay exception standpoint as a report or a
23 statement by the agency, or consider it only for the
24 truth of the matter that EPA said it, I think there
25 are multiple grounds that the court could accept

1 this. And I think it will be well served by being
2 as informed as possible about this.

3 THE COURT: For what purpose or purposes is
4 it being offered?

5 MR. MCDANIEL: I'm offering it to the court
6 first to show that the State of Oklahoma is engaged
7 in a two-state process convened by the Illinois --
8 excuse me, convened by the EPA for purposes of
9 addressing the very concerns that this court is
10 being asked to address.

11 THE COURT: You've already done that
12 through the testimony and the letter, right? What
13 other purposes are you seeking to admit this
14 particular document?

15 MR. MCDANIEL: I think what's most critical
16 about this particular document, Your Honor, is on
17 the final slide, and that is the time frame. As
18 this court considers the remedies -- or the last two
19 slides, excuse me.

20 As the court considers the remedies that
21 it's being asked to order and assertions by the
22 State with regard to urgency and a need for action,
23 we have a critical paradox that this document shows
24 the court; whereas the State of Oklahoma apparently
25 has no time frame for acting on its own to initiate

1 a TMDL and asserts that is powerless to do anything
2 with the state of Arkansas.

3 The EPA is telling the State of Oklahoma
4 and the state of Arkansas that it will act and it
5 will have a TMDL in place, and has set forth the
6 schedule that it shall be completed by September 15,
7 2011.

8 THE COURT: Point me to the government
9 activity. You're talking about 803(6)?

10 MR. MCDANIEL: (8), sir.

11 THE COURT: That's public records. But
12 you've --

13 MR. MCDANIEL: Records, reports, statements
14 or data compilation in any form of public offices or
15 agencies --

16 THE COURT: Setting forth (A) the
17 activities of the office or the agency?

18 MR. MCDANIEL: Correct.

19 THE COURT: All right. On that particular
20 point, 803(8)(A) and focusing on time frame, the
21 activities of the EPA relative to a time frame.
22 Mr. Nance.

23 MR. NANCE: Your Honor, this is not
24 something that sets forth the regular activities of
25 the EPA as an agency. It's simply the results of a

1 planning meeting, and it may or may not come to
2 pass. And to the extent that it forecasts a future
3 event, it is not a regular activity of the agency.

4 THE COURT: Is there a requirement that
5 803(8)(A) reflect a regular activity of the agency?
6 Mr. McDaniel.

7 MR. MCDANIEL: I'm sorry, Your Honor, I got
8 distracted because it's appearing to me that this
9 copy may not be the right copy of the --

10 THE COURT: Yes, sir. I don't see any
11 proposed time frame.

12 MR. MCDANIEL: That's --

13 (Off-the-record discussion was had.)

14 THE COURT: We need to give Terri a break
15 here. We've been going on too long. And although I
16 intend to get you to your dentist -- you may want me
17 to hold you over here -- but we need to give the
18 court reporter a break here. We'll be in recess.

19 (Recess was had.)

20 THE COURT: Mr. McDaniel.

21 MR. MCDANIEL: Your Honor, I created a
22 little confusion I want to straighten out so the
23 court can render its decision about admitting these
24 documents. The one I handed you marked as 8131 is
25 -- there were really two components to the

1 PowerPoint. I handed you the first component. The
2 second one is marked as 8126. That includes the
3 dates that I so vigorously argued for.

4 So, Your Honor, the argument that I made
5 with regard to the dates and its relevance and the
6 basis for admissibility apply to what has been
7 marked as Defendants' 8126.

8 The prior exhibit, 8131, the balance of the
9 PowerPoint discussing -- or including the EPA's
10 statements about its activities still assert -- fall
11 within the public records exception, 803(8)(A). So
12 we offer those both for admission.

13 THE COURT: Well, the arguments seem to go
14 more directly to 8126 as opposed to 8131.
15 Mr. Nance.

16 MR. NANCE: Your Honor, Ms. Moll has handed
17 me an excerpt from McCormick about 81 -- 803(A)(8)
18 -- (8)(A), activities of the office. And McCormick
19 indicates that an example of that sort of record is
20 a record of receipts or disbursements of the
21 Treasury Department as an example, and then
22 comments, "In addition to the assurances of
23 reliability common to public records and reports
24 generally, this group has the assurances of accuracy
25 that characterize business records that are

1 routinely admitted."

2 These are not the sort of things that are
3 like business records or records of routinely
4 conducted activities. They're specific documents
5 about specific events. And 8126 is not even a
6 report of the activities of the office; it's a
7 report of the possible future activities of the
8 office. And I don't think either one, but
9 particularly, 8126 meets the exception that is
10 offered.

11 In addition, there's just a foundational
12 authentication issue because the director wasn't at
13 this meeting, and it's been handed to him by his
14 people. So we would ask the court to deny the
15 admission of both 8131 and 8126.

16 THE COURT: Any response to the regularly
17 conducted activities argument?

18 MR. MCDANIEL: Well, this doesn't say the
19 regularly conducted activities. It says, "the
20 activities." And it does include a statement by the
21 agency regarding its activities.

22 But I think, Your Honor, based upon the
23 testimony that you've heard over the 30 minutes
24 before the break, I think the court has been given
25 an ample record with regard to the indicia of

1 trustworthiness of this document.

2 So I certainly can continue to argue the
3 point that this is a public record, but I think the
4 residual exception is a sound basis for admitting
5 the document, particularly given how probative it
6 is, given the fact that all of this transpired while
7 we were in trial, which is difficult for the
8 defendants to then bring a custodian, etcetera, here
9 before the court.

10 THE COURT: Well, of course, the difficulty
11 of bringing a custodian doesn't necessarily reflect
12 on reliability or make its indicia of reliability
13 stronger.

14 MR. MCDANIEL: Certainly.

15 MR. NANCE: Your Honor, I might add, I
16 think they could have brought Mr. Derichsweiler, or
17 I believe some of these Arkansas attendees are on
18 their witness list. And the director certainly
19 wasn't even at the meeting.

20 THE COURT: Mr. McDaniel.

21 MR. MCDANIEL: Well, I think that this
22 comes down to authentication, Your Honor. I
23 certainly am not trying to exert any type of undue
24 influence on the court. That sounded horrible. No,
25 I take that back. I'm not trying to --

1 THE COURT: That's your job, isn't it?

2 MR. MCDANIEL: I think the "undue" part is
3 what sounded bad. I am trying to influence you,
4 although not very well.

5 But when we were going through our pretrial
6 conference, one of the statements the court made
7 which I very much took note of, and that is when it
8 comes to issues of identification and
9 authentication, the court is not going to allow
10 parties to simply throw up unnecessary roadblocks to
11 getting to the truth.

12 And I think, here, it's -- I understand
13 these are legitimate evidentiary points Mr. Nance is
14 making, so I'm not making that argument, but the
15 State has done nothing to tell this court about
16 this. And we have worked with every scrap of
17 evidence that we could find and information we could
18 obtain to make the court aware of what's going on in
19 this important work at EPA.

20 Mr. Thompson has testified that his people
21 brought this back, gave it to him, representing that
22 this is what was provided to them at the EPA
23 meeting, with the expectation that he would review
24 it, understanding that's what this meant.

25 THE COURT: All right. I don't believe he

1 said that with regard to 8126, however, has he?

2 MR. MCDANIEL: No, we haven't discussed
3 that, but I will gladly do so.

4 THE COURT: The objection is sustained as
5 to 8131. I'll allow further questioning with regard
6 to 8126.

7 MR. MCDANIEL: Thank you, Your Honor.

8 Q. (By Mr. McDaniel) Mr. Thompson, I handed you
9 at the end of the break what's been marked as
10 Defendants' Joint Exhibit 8126, two pages. Do you
11 recognize that, sir?

12 A. Yes.

13 Q. What is it?

14 A. It's part of the material that was given to me
15 by Mr. Derichsweiler.

16 Q. Was it your understanding that this material
17 was provided to Mr. Derichsweiler at this EPA
18 meeting in Dallas on November 20, 2009?

19 A. Yes.

20 Q. Did Mr. Derichsweiler give this material to you
21 so you could be informed as to what occurred at this
22 meeting?

23 A. Yes.

24 Q. All right, sir.

25 MR. MCDANIEL: Your Honor, defendants offer

1 8126.

2 MR. NANCE: Same objections, Your Honor.

3 THE COURT: The court will admit 8126
4 pursuant to 803(8)(A) and the residual exception.
5 The tentative schedule set forth here sets forth the
6 -- a regular activity of the EPA insofar as the EPA
7 engages in modeling projects. It is not a
8 representation as to activities that have occurred,
9 but it is a regular activity of the EPA to set
10 schedules.

11 The document is admitted not as proof of
12 that which will be done by those dates but, rather,
13 for proof that the EPA has set the tentative
14 schedule. 8126 is admitted.

15 Also under the residual exception, there's
16 sufficient indicia of reliability as to the setting
17 of a tentative schedule by the EPA.

18 MR. MCDANIEL: Thank you for allowing us to
19 grind through that, Your Honor.

20 Q. (By Mr. McDaniel) Let me wrap this particular
21 aspect up, Mr. Thompson. Thank you for your
22 patience as lawyers do what they do.

23 The -- this EPA process, the two-state
24 process, to your knowledge, is it -- it's not tied
25 to your office's concerns about the TMDL

1 implementation issues with regard to -- that you
2 expressed with regard to completing the Oklahoma
3 TMDL?

4 A. It is a concern --

5 Q. Let me try to ask a better question. The
6 concerns that we discussed when you and I first
7 started talking this morning that you expressed with
8 the implementation program for the Oklahoma TMDL,
9 that is not going to affect the EPA's process,
10 correct?

11 A. I don't know that that's the case. Issues will
12 be raised by both states in this process. How EPA
13 chooses to react to those, I have no way of knowing.

14 Q. Okay. Have those concerns been communicated to
15 the EPA as of yet?

16 A. Not to my knowledge, but they will be. This
17 was a kickoff meeting. And I don't know that we've
18 been afforded that opportunity yet, but we will.

19 Q. All right. And one thing I want to clear up
20 with regard to the Scenic River standard.

21 MR. MCDANIEL: And I want to ask you,
22 please, if you can bring up -- Tyson Demonstrative
23 96 which is simply a copy of the Oklahoma
24 Administrative Code, Title 785, Section 45-5-19,
25 Aesthetics. And if you could blow that up as much

1 as you could so Mr. Thompson can see it on the
2 screen. The text.

3 Q. (By Mr. McDaniel) Can you see it, sir?

4 A. Yes.

5 Q. Do you agree that that is the water quality
6 criteria for Scenic Rivers in Oklahoma?

7 A. Yes.

8 Q. And under section B -- excuse me, C,
9 subparagraph 2, included within that rule is the
10 30-day geometric mean total phosphorus concentration
11 criteria, correct?

12 A. Yes.

13 Q. So this geometric mean methodology is part of
14 the Scenic Rivers criteria, at least by rule,
15 correct?

16 A. That's correct.

17 Q. And the Water Resources Board can change this
18 rule, sir?

19 A. They can.

20 Q. All right. Now, is it true, sir, that by
21 statute, each Oklahoma environmental agency must
22 promulgate a water quality standards implementation
23 plan --

24 MR. NANCE: Judge, we're beyond the scope
25 of cross.

1 MR. MCDANIEL: If I could complete my
2 question, Your Honor, then I can respond.

3 THE COURT: All right. Go ahead and
4 complete the question.

5 MR. NANCE: I apologize.

6 MR. MCDANIEL: Just because I was
7 stuttering doesn't mean I was done.

8 THE COURT: Frankly, I thought you were
9 done as well.

10 Q. (By Mr. McDaniel) Isn't it true, Mr. Thompson,
11 that, by statute, every environmental agency must
12 promulgate a water quality standards implementation
13 plan for its jurisdictional area of responsibility,
14 specifying how the agency utilizes and enforces
15 Oklahoma's water quality standards for surface water
16 and groundwater?

17 MR. NANCE: Same objection, beyond the
18 scope of cross.

19 MR. MCDANIEL: Your Honor, this goes
20 directly to the line of questions Mr. Nance asked of
21 Mr. Thompson, suggesting that even if the TMDL was
22 enacted, there is nothing that could be done with
23 regard to poultry litter in order to bring it within
24 compliance with the TMDL. And I want to point out
25 that Oklahoma statutes are directly contrary to that

1 point.

2 THE COURT: Mr. Nance.

3 MR. NANCE: Your Honor, I don't know what
4 statute he's talking about, but I didn't ask about a
5 water quality implementation plan. I asked about
6 enforcing a TMDL.

7 MR. MCDANIEL: It's the water quality
8 standards implementation plan that proves that the
9 statements made are incorrect. And, in fact, ODAFF,
10 just like ODEQ, is bound to use its jurisdiction to
11 meet TMDL requirements.

12 MR. NANCE: To the extent he's making an
13 argument about ODAFF, he's way beyond the scope of
14 cross.

15 THE COURT: As I recall, in your questions,
16 Mr. Nance, you asked who had authority. And
17 Mr. Thompson said it was ODAFF, correct? You're not
18 trying to show, Mr. McDaniel, that ODEQ has such
19 authority?

20 MR. MCDANIEL: Not directly. ODEQ, as the
21 parent agency over TMDL, is required by statute, as
22 are all the other agencies, to coordinate with ODEQ
23 to achieve the TMDL. That includes ODAFF. That's
24 the direction of my questions, sir.

25 THE COURT: First of all, I don't know that

1 this question really goes to impeach anything that
2 Mr. Thompson said. He said ODAFF has the authority,
3 to his knowledge, right?

4 MR. MCDANIEL: Well, the -- he -- Mr. Nance
5 asked whether ODEQ had any authority regarding
6 poultry. He said they had no authority, they can
7 only make recommendations in the TMDL. He said
8 ODAFF has -- whatever authority there is, ODAFF has
9 it.

10 And the point what I'm impeaching is, this
11 is -- these TMDL requirements by the interplay of
12 the water quality standards implementation plan are
13 not recommendations, they are legal requirements.

14 MR. NANCE: Actually, Your Honor, the
15 director said he didn't know what ODAFF's authority
16 was. This is legal argument rather than trying to
17 develop anything factual from this witness.

18 MR. MCDANIEL: I'm trying to explore the
19 statutes and how the agencies interrelate in order
20 to satisfy the requirements of the TMDL. And as a
21 director of ODEQ --

22 THE COURT: These are legal issues. The
23 objection is sustained.

24 Q. (By Mr. McDaniel) Mr. Thompson, is it your
25 understanding that all the Oklahoma environmental

1 agencies are obliged to use their jurisdictions to
2 satisfy the requirements of a TMDL?

3 A. Yes.

4 Q. Is it your understanding that ODAFF has
5 regulatory authority over poultry feeding operations?

6 A. Yes.

7 Q. And you told Mr. Nance that you expected one
8 outcome of the TMDL would be a requirement for
9 reduced loading, both point and nonpoint --

10 A. Yes.

11 Q. -- in the IRW --

12 A. Yes.

13 Q. -- right?

14 If that's the case, if the TMDL issued by
15 whomever says there needs to be reduced loading from
16 nonpoint sources, and nonpoint sources were deemed
17 to include activities encompassing poultry litter
18 application, sir, is it your belief that under
19 Oklahoma law that ODAFF would then be obliged to
20 exercise its regulatory authority to change litter
21 application standards in the Illinois River
22 Watershed?

23 MR. NANCE: Objection. Calls for a legal
24 conclusion.

25 THE COURT: Sustained.

1 Q. (By Mr. McDaniel) If your TMDL or any TMDL
2 issued by the EPA, for that matter, calls for a
3 reduction of nonpoint source phosphorus load in the
4 Illinois River Watershed, what duty, if any, does
5 ODAFF have with regard to poultry feeding
6 operations?

7 MR. NANCE: Well, same objection. Calls
8 for a legal conclusion, and there's no foundation
9 that he knows the answer. In fact, he says he
10 doesn't.

11 THE COURT: Sustained.

12 Q. (By Mr. McDaniel) Mr. Thompson, if -- assuming
13 -- assuming EPA fulfills the plans it has set forth
14 for a two-state TMDL, is it your understanding that
15 Oklahoma will take all necessary steps to fulfill
16 the requirements of that TMDL?

17 A. I can speak for the DEQ, and the answer is yes.

18 Q. Thank you.

19 MR. MCDANIEL: I will pass the witness,
20 Your Honor.

21 THE COURT: I take it you can't speak for
22 ODAFF. Mr. Nance.

23 MR. ELROD: Your Honor, I just have a few.

24 THE COURT: I'm sorry. Mr. Elrod.

25 MR. ELROD: I just have a very few.

Terri Beeler, RMR, FCRR

United States Court Reporter
333 W. 4th St.

Tulsa, OK 74103 * 918-699-4877

REDIRECT EXAMINATION

BY MR. ELROD:

Q. Does Oklahoma have -- I'm sorry, Mr. Thompson, I'm John Elrod, and I represent Simmons Foods. I met you in the hallway about ten years ago in your offices, but there's no reason why you would remember that encounter.

Oklahoma has a governor.

A. Yes.

Q. Do you report to the governor?

A. I report to the Environmental Quality Board, and that board is appointed by the governor.

Q. Yes, sir. And does Secretary Peach report to the governor?

A. I'm not -- I'm not clear what those lines are.

Q. Does Duane Smith report to the governor?

MR. NANCE: Judge, this is beyond the scope of cross certainly.

THE COURT: Sustained.

MR. ELROD: Your Honor, it has to do with the power of the State of Oklahoma to do what needs to be done, and I'm just --

THE COURT: I understand. It's beyond the scope.

MR. ELROD: All right.

1 Q. (By Mr. Elrod) The statement of joint
2 principles that was entered by Arkansas and
3 Oklahoma, does it not say in there, sir, that
4 Oklahoma will not ask Arkansas to do anything it
5 would not be willing to do itself?

6 MR. NANCE: Again, beyond the scope,
7 Your Honor.

8 MR. ELROD: No, Your Honor, it's not beyond
9 the scope. It has to do with spending money.
10 Well --

11 THE COURT: I wondered the same question,
12 frankly, Mr. Elrod, but it is beyond the scope.
13 Sustained.

14 Q. (By Mr. Elrod) My understanding of your
15 testimony, sir, was that your concern about the bias
16 created by the 30-day geomean in favor of nonpoint
17 sources because of the way that that mathematics --
18 that math occurs would cause, unfairly, Stillwell
19 and Tahlequah to spend money to upgrade their
20 facilities; was that not your testimony?

21 A. Tahlequah and Westville. Well, I don't know
22 that I said it would unnecessarily cause them to
23 spend money; I said that there was a bias in the way
24 that the TMDL was done.

25 Q. Yes, sir. And that the results of the TMDL may

1 require them to spend money to upgrade their
2 facilities: Stillwell, Westville and Tahlequah?

3 A. That's correct.

4 Q. Are you aware, sir, that the cities of
5 northwest Arkansas, as a result of that statement of
6 joint principles, have spent hundreds and millions
7 of dollars to upgrade their facilities?

8 A. I am aware that they have upgraded some of
9 their facilities.

10 Q. Fayetteville has opened a new westside facility
11 that's state-of-the-art, cost over \$100 million,
12 correct?

13 A. I don't know the cost and I don't know -- I
14 know they've opened a new facility.

15 Q. Rogers has spent money. And Siloam Springs is
16 currently upgrading its plant, correct, sir?

17 A. I don't know that specifically.

18 Q. Would it be a violation of the joint statement
19 of principles for Oklahoma to refuse to upgrade
20 their facilities to meet the standards now being met
21 in Arkansas, sir?

22 MR. NANCE: Objection. Calls for a legal
23 conclusion, and it's beyond the scope.

24 THE COURT: Sustained.

25 MR. ELROD: That's all I have.

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United States Court Reporter
333 W. 4th St.

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REDIRECT EXAMINATION

BY MR. HOPSON:

Q. The ground has been well trampled, and I know you want to get off to the dentist. But I've just got to ask you about the time line, okay, Mr. Thompson.

How long have you been the head of the DEQ?

A. Six and a half years.

Q. Okay. And that's far enough back that you'll recall that this TMDL process actually started about '03 or '04; isn't that right?

A. I suspect that's right, yes.

Q. To clarify, I'm talking about the specific Oklahoma TMDL that was being started by your agency, right?

A. Um --

Q. There's the EPA TMDL, and there's the Oklahoma TMDL. And we're focusing now on the Oklahoma TMDL. That started back in '03 and '04, right?

A. I don't have an independent recollection, I'm sorry, of that. But I wouldn't deny it.

Q. Okay. Do you recall that EPA had approved something called a QAAP by 2004?

A. Yes.

Q. And tell His Honor what the QAAP is.

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1 A. It's the quality assurance plan by which any
2 activity would be done.

3 Q. And by 2004, you'd also retained some
4 scientists at the university to do some preliminary
5 modeling in connection with the TMDL; isn't that
6 right?

7 MR. NANCE: Judge, it's beyond the scope of
8 cross.

9 THE COURT: I don't believe so. Overruled.

10 THE WITNESS: Yes.

11 Q. (By Mr. Hopson) Dan Storm was one of those
12 scientists, right?

13 A. Yes.

14 Q. And Dan Storm's report is actually one of the
15 things that caused you to have some concerns about
16 the unfairness inherent in the phosphorus criterion,
17 isn't it?

18 A. What caused me to have concern was a report
19 given to me by my water quality division director
20 Jon Craig. Mr. Craig may have -- that's what caused
21 my concern.

22 Q. Well, let me ask the question this way: Do you
23 know and do you recall that Dr. Storm actually
24 concluded that 100 percent litter export would have
25 no impact on meeting the phosphorus criterion in the

1 Scenic Rivers? Do you recall that?

2 MR. NANCE: Beyond the scope of cross, and
3 it's hearsay.

4 MR. HOPSON: I'm asking if he recalls
5 something. How can that be hearsay?

6 THE COURT: Overruled.

7 THE WITNESS: I do not.

8 Q. (By Mr. Hopson) You don't recall reading
9 Dr. Storm's report or that influencing your concerns
10 about this alleged unfairness in the phosphorus
11 criterion?

12 A. No.

13 Q. Do you recall Mr. Nance asking you about what
14 the outcome of a TMDL might be? Do you recall those
15 questions?

16 A. Yes.

17 Q. And you said that there was no federal law that
18 could compel regulation of nonpoint sources; isn't
19 that right?

20 A. Yes.

21 Q. But you're not suggesting, by the absence of
22 federal law, that the State of Oklahoma would be
23 powerless to address nonpoint sources, are you?

24 MR. NANCE: Objection, calls for a legal
25 conclusion.

1 MR. HOPSON: From the head of the DEQ,
2 who's already testified about the law and the
3 absence of federal law.

4 THE COURT: Overruled.

5 THE WITNESS: I'm sorry, could you restate
6 the question.

7 Q. (By Mr. Hopson) Sure. Let me set it up
8 properly. In the course of your cross-examination
9 by Mr. Nance, he was asking you about what the
10 outcomes would be if a TMDL was done. Do you recall
11 those questions?

12 A. Yes.

13 Q. And one of the things that you told us is that
14 there would be no federal law, as I understood you,
15 that would compel the regulation of nonpoint sources
16 as an outcome of the TMDL process. Do I have that
17 right?

18 A. That's correct.

19 Q. And by testifying to that, and by testifying to
20 the absence of your agency's ability to regulate
21 poultry, you weren't suggesting to His Honor that
22 the State of Oklahoma, as a whole, is powerless to
23 deal with nonpoint sources, are you?

24 A. My recollection is that I said if such
25 jurisdiction existed, it existed with the Department

1 of Agriculture.

2 Q. So the answer to my question is, no, you
3 weren't suggesting to His Honor that the State of
4 Oklahoma is powerless to regulate nonpoint sources,
5 correct?

6 MR. NANCE: Objection, asked and answered.

7 THE COURT: Sustained.

8 Q. (By Mr. Hopson) Let me ask you this. Last
9 thing I want to discuss. I believe you said to
10 Mr. McDaniel that you were going to express, either
11 personally or through your agency on behalf of the
12 State of Oklahoma, the concerns you had about the
13 phosphorus criterion in the EPA TMDL process; is
14 that correct?

15 A. That's correct.

16 Q. That hasn't happened yet, as far as you know,
17 sir?

18 A. No, it hasn't. As far as I know, it has not.

19 Q. But it's also true that nobody at the EPA has
20 said that their time line or their TMDL process is
21 going to wait on you and the Oklahoma resources --
22 Water Resources Board getting together on this
23 issue, right?

24 MR. NANCE: Objection. Calls for hearsay
25 and speculation on what the EPA has said or may have

1 said.

2 THE COURT: Overruled.

3 THE WITNESS: I'm sorry, would you repeat
4 the question, please.

5 Q. (By Mr. Hopson) Sure. On the one hand, you
6 said -- and I understand and appreciate what you're
7 saying -- that for the EPA TMDL process, you wanted
8 to express your views, your concerns that you've
9 explained to us today about the way the 0.037
10 phosphorus criterion works, right?

11 A. Yes.

12 Q. And you're going to explain to the EPA the same
13 thing you explained to His Honor, Judge Frizzell,
14 today, right?

15 A. That's correct.

16 Q. My point is simply this: While I appreciate
17 you're going to do that, you don't have any reason
18 to believe that the EPA's current timetables or the
19 hiring of its experts or the modeling that's going
20 on is going to wait for you and the Oklahoma Water
21 Resources Board to come to some conclusion on that
22 issue, do you?

23 A. I don't have any way to know either way how
24 that discussion will impact what EPA does.

25 Q. I have no further questions. Thank you,

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1 Mr. Thompson.

2 THE COURT: I believe that covers the
3 examination. Mr. Thompson, thank you very much for
4 being here today. You're excused.

5 MR. NANCE: May I have a little recross,
6 Your Honor? I'll be very brief.

7 THE COURT: Well, of course, this is
8 essentially reredirect. You -- I'm sorry, no,
9 you're entirely right. I'm sorry. The way this
10 came on, it confused -- you do have an opportunity,
11 I'm sorry. You do have a recross.

12 MR. NANCE: We're here in an unusual
13 posture, Your Honor.

14 **RECROSS EXAMINATION**

15 BY MR. NANCE:

16 Q. Sir, would you look at the EPA letter, which is
17 Defendants' Exhibit 8090. Do you still have that in
18 front of you?

19 A. This is the letter from EPA to Mr. Strong and
20 Ms. Marks?

21 Q. Correct.

22 A. Yes, I have it.

23 Q. The first paragraph there about halfway down
24 mentions recent permitting activities involving the
25 Northwest Arkansas Conservation Authority. Do you

1 see that language?

2 A. I do.

3 Q. Are you familiar with that permitting activity?

4 A. Generally, yes.

5 Q. Is the Northwest Arkansas Conservation
6 Authority a proposed new nonpoint source discharger
7 in the watershed?

8 A. Yes.

9 Q. What action, if any, did the State of Oklahoma
10 or your agency take with regard to that permit?

11 A. We --

12 MR. MCDANIEL: Objection, scope,
13 Your Honor.

14 THE COURT: Overruled.

15 THE WITNESS: We commented that we believed
16 that it was inappropriate for any discharge -- or
17 that the discharge from this facility be allowed in
18 an impaired waterbody in the state of Arkansas.

19 Q. (By Mr. Nance) And has that been something of
20 an issue as between Oklahoma, Arkansas and the EPA?

21 A. Yes.

22 Q. In the next paragraph down, I think
23 Mr. McDaniel read a sentence, it begins on the third
24 line, "EPA's purpose in this effort is to provide a
25 technically sound basis upon which regulatory and

1 nonregulatory decisions can be confidently based
2 that will lead to reductions in nutrients from both
3 point and nonpoint..." Do you see that?

4 A. Yes.

5 Q. Are the regulatory decisions that are mentioned
6 there those dealing with point sources?

7 A. Yes.

8 Q. Are the nonregulatory decisions there the ones
9 dealing with nonpoint sources?

10 MR. MCDANIEL: I object, Your Honor. In
11 the court's ruling in sustaining the objection, I
12 was not allowed to explore with Mr. Thompson the
13 agency's jurisdiction to deal with nonpoint sources
14 with regard to TMDLs. So I think it's inappropriate
15 for Mr. Nance to have the liberty to do that.

16 MR. HOPSON: And it calls for speculation,
17 Your Honor.

18 THE COURT: The objection is sustained.

19 Q. (By Mr. Nance) On the top of the second page
20 of the letter, Mr. Thompson, where the EPA says, "We
21 expect this modeling effort may lead to the
22 development of one or more Total Maximum Daily Loads
23 for the Illinois basin," do you see that?

24 A. Yes.

25 Q. Is it your understanding that it is a done

1 deal, that the EPA will do a single TMDL for both
2 sides of the border?

3 A. I believe that to be the goal.

4 Q. Now, on Exhibit 8126, which was the
5 timetable --

6 A. Yes.

7 Q. How long have you been involved in
8 environmental protection in the state of Oklahoma?

9 A. Twenty-five years.

10 Q. During that 25 years, have you had an
11 opportunity to become acquainted with EPA's track
12 record in meeting its own deadlines?

13 A. Yes.

14 Q. Is that a good track record or a bad track
15 record?

16 MR. HOPSON: Objection, Your Honor, calls
17 for opinion and speculation.

18 THE COURT: I don't know how much
19 speculation is involved. Overruled. Go ahead. You
20 may answer.

21 THE WITNESS: I'm torn between answering
22 "rarely" and "never."

23 MR. NANCE: Nothing further, Your Honor.

24 THE COURT: I'm interested with the
25 nomenclature. The Northwest Arkansas Conservation

1 Authority, that's basically a wastewater treatment
2 group?

3 THE WITNESS: Wastewater treatment plant at
4 Bentonville.

5 THE COURT: Okay. We're in 1984, ladies
6 and gentlemen. Now, I'm sure you're aware of Siloam
7 Springs. I've had lots of testimony here with
8 regard to the wastewater treatment plant there
9 dumping into Sager Creek which then dumps into Flint
10 Creek. Are you aware of the -- where they are in
11 the process?

12 THE WITNESS: This is Siloam Springs,
13 Arkansas?

14 THE COURT: Yes.

15 THE WITNESS: No, I'm not.

16 THE COURT: All right. You may be excused.

17 THE WITNESS: Thank you very much, sir.

18 THE COURT: Dr. Sullivan, you're back.

19 Go ahead, Mr. Bullock.

20 MR. BULLOCK: Good morning, almost.

21 THE WITNESS: Good morning, Mr. Bullock.

22 **CROSS-EXAMINATION**

23 BY MR. BULLOCK:

24 Q. Doctor, in terms of the scope of your
25 expertise, do you regard yourself as an expert in

1 watershed modeling?

2 A. I've been involved in a great many projects on
3 watershed modeling, but I'm not a modeler.

4 Q. So in terms of listing your expertise, it
5 wouldn't be as a watershed modeler, would it?

6 A. I think I would list it as I have substantial
7 expertise in watershed modeling, but I do not sit at
8 the computer and run a watershed model.

9 Q. Have you ever run watershed models?

10 A. No.

11 Q. How about as a soil scientist, do you regard
12 yourself as being an expert in soil science?

13 A. A large amount of the work that I do on
14 watersheds, which is much of what I do, involves
15 both modeling and the work on soils. I have been
16 involved in conducting soil surveys and instructing
17 federal personnel how to conduct soil surveys. I
18 published research in the Soil Scientist Society of
19 America Journal.

20 So I have a fair amount of expertise in
21 terms of soils. But, again, I would not classify
22 myself as a soil scientist but, rather, as an
23 environmental scientist, part of which is soils.

24 Q. Do you regard yourself as an expert in geology?

25 A. Again, the environmental work that I do does

Terri Beeler, RMR, FCRR

United States Court Reporter
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1 involve geology, not as much probably as it involves
2 soils, but I've done a number of studies that have a
3 strong geological component, and published the
4 research on some of that in the scientific
5 literature.

6 So I don't regard myself as a geologist,
7 but I would say that as an environmental scientist,
8 I have a fair amount of understanding and expertise
9 in geology.

10 Q. Do you regard yourself as an expert in
11 limnology?

12 A. I would say that the majority probably, or at
13 least a large percentage of my publications are
14 limnological publications. So I certainly regard
15 myself as an expert in limnology. But I don't
16 classify myself -- I don't pigeonhole myself into
17 these various categories but, rather, classify
18 myself as an environmental scientist, which includes
19 these categories.

20 Q. Have you ever assessed the eutrophic state of
21 lakes?

22 A. I have evaluated nutrients in lakes, but I
23 would not --

24 Q. Sir, please --

25 A. -- I would not say that I classified lakes

1 relative to the trophic status, no.

2 Q. Do you regard yourself as an expert in
3 hydrology?

4 A. Again, I do have a lot of expertise in
5 hydrology. I publish in the Journal of Hydrology.
6 I've conducted a lot of studies with a very strong
7 hydrological component, but I do not classify myself
8 as a hydrologist.

9 Q. Do you regard yourself as a statistician?

10 A. I have a fair amount of experience in
11 statistics, but I do not call myself a statistician.

12 Q. Okay. So let me be sure that I have this
13 right. You consider yourself as having expertise in
14 watershed modeling, soils, geology, limnology,
15 hydrology, and statistics?

16 A. That's correct. That's called
17 multidisciplinary environmental science.

18 Q. And those projects where there are substantial
19 questions of, for instance, geology, do those
20 projects generally involve somebody that would be
21 considered an expert in geology?

22 A. Are you speaking of the projects that I have
23 worked on? Is that the question?

24 Q. Yes, sir.

25 A. I would say that probably the most prominent

Terri Beeler, RMR, FCRR

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1 project I worked on that included a very strong
2 geological component, which was for the Southern
3 Appalachian Mountains Initiative, part of the work I
4 did for them, and I had a geological publication
5 from that, I collaborated with a scientist who would
6 also classify himself as an environmental scientist
7 rather than a geologist. But I would acknowledge
8 that that scientist did have a lot of involvement in
9 the geological aspects of that project. We did it
10 together.

11 Q. That's generally the way these projects work is
12 that because they are multidisciplinary, they
13 involve people with multiple disciplines, correct?

14 A. It depends on the project. A great many of the
15 projects that are in my resume and projects that
16 I've talked about involved myself as not only the
17 lead scientist but the only Ph.D.-level scientist.
18 So many of the multidisciplinary environmental
19 projects I've conducted where I would not have had
20 the involvement and participation of other
21 Ph.D.-level scientists.

22 But on the other hand, there also are a
23 number of projects that I've done that did involve
24 collaboration with multiple scientists; in some
25 cases, as many as ten, from a variety of

1 disciplines. So it depends on which project you're
2 speaking of.

3 Q. Depends on the scope of the project and how
4 technical the issues are in that project, correct?

5 A. I think those would be two of the things involved.
6 There would be many other considerations as well in terms
7 of how I would go about selecting other scientists to
8 collaborate with on one of my projects.

9 Q. In performing your work in this case, did you direct
10 or collect yourself any environmental samples?

11 A. Did I collect environmental samples? No.

12 Q. Did you direct anyone else to?

13 A. No.

14 Q. Did you ask for any environmental data other than
15 reviewing the -- let me rephrase.

16 Did you ever ask for any environmental samples
17 to be taken?

18 A. I would not say I asked for environmental samples to
19 be taken. I would say I discussed the possibility of
20 collecting environmental samples, and I also discussed
21 the environmental samples that may have been collected in
22 conjunction with some work by Jim Chadwick for the
23 defendants.

24 Q. Doctor, just to help set the -- prepare the setting
25 here in terms of the issues we're going to deal with,

1 would you pull out your exhibits. And I'm looking behind
2 tab 18. It is DJX633-0031 is the first of the exhibits
3 behind that tab. There are several.

4 A. Yes, sir.

5 Q. These are the pictures that you took. And you
6 offered them concerning areas which might be subject to
7 erosion, correct?

8 A. I did not take these pictures.

9 Q. Okay. You were there when these pictures were
10 taken?

11 A. That's correct.

12 Q. And you're representing to this court that these are
13 an accurate depiction of these scenes as you viewed them
14 that day?

15 A. That's correct.

16 Q. And when I look at the first picture, that is
17 633-0031, I see that in those sunlight areas, the water
18 there is green. Is that what you recall seeing that day?

19 A. My recollection would be that this --

20 MR. ELROD: Can we all see?

21 MR. BULLOCK: Could you put up 633-0031 of the
22 defendants'. Why don't we wait for the gallery to catch
23 up. Would it help for the moment if we just have the
24 defendants stick it up and --

25 THE COURT: Tell you what, Mr. Bullock, we're

1 sitting at straight up noon, let's just take a recess and
2 we'll get back to the picture after lunch.

3 MR. BULLOCK: Thank you, Your Honor.

4 (Whereupon a recess was had.)

5

6 REPORTER'S CERTIFICATE

7 I CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT
8 TRANSCRIPT OF THE PROCEEDINGS IN THE ABOVE-ENTITLED
9 MATTER.

10

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